# Performance Par Excellence





Marine Engine Oils



## Industrial Oils





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**Safety Data Sheet** 

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Section 1: Identification of the Substance / Mixtur	Section 1: Identification of the Substance / Mixture					
1.1 Product identifier						
roduct name Divyol MDE Oil 340						
Product description	Marine Diesel Engine Oil (SAE 30)					
Product type	Industrial Oil					
MARPOL Annex-1	****					
1.2 Identified uses	·					
Distribution of substance	Industrial					
Formulation & (re)packing of substance & mixtures	Industrial					
Manufacture of substance	Industrial					
Functional fluids	Industrial					
Section 2: Hazard Identification						
4-Extreme	Health	1				
3-High	Flammability	1				
2-Moderate	Reactivity	0				
1-Slight	Special	-				
Section 3: Compostion / Information on Ingredier	its					
Product / Ingredient name	CAS No.: Not applicable for blende Distillates (Petroleum) mixture of h					
Section 4: First Aid Measures						
Inhalation exposure	Remove to fresh air & provide oxyc	gen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.					
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.					
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.					
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.					
Section 5: Fire Fighting Measures						
5.1 Extinguishing media						
Unsuitable extinguishing media	Use dry powder foam carbon dioxide. Do not use direct water and wet chemicals, or water on the					
5.2 Special hazards arising from the substance or mixtu	re					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.					
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.					
5.3 Advice for firefighters	5.3 Advice for firefighters					
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.					
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.					





6.1 Personal precautions, protective equipment and emergency procedures					
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.				
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.				
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.				
6.3 Methods and material for containment and cleaning	up				
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.				
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.				
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.				
Section 7: Handling and Storage					
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.				
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.				
7.3 Specific end use(s) – Recommendations	Not available				



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Pro						
	insulted for any available use-specific information provided in the Exposure Scenario(s).					
8.1 Control parameters						
Occupational exposure limits						
Product / Ingredient name	Distillates, mixture of hydrocarbons					
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.					
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.					
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.					
Individual protection measures						
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.					
Eye / face protection	Recommended: Safety glasses with side shields.					
Skin protection						
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.					
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.					
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.					
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.					
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptabl levels.					
Section 9: Physical and Chemical Properties	S					
Appearance	Clear					
Physical state	Liquid					
Colour	Yellow					
Odor	Petroleum odor					
Odour threshold	Not available					
рН	Not applicable					
Pour point	< -21 °C (ASTM D 97)					
Flash point >240 °C						
Evaporation rate Not available						
Flammability (solid, gas)	Not available					

≤ 0,1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)

Not available

Not available

0.88 max at 15 °C





Solubility (water)		Incolubio	tor		
Solubility (water) Partition coefficient (n-octanol/water)		Insoluble in water			
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature	>300 °C				
Kinematic viscosity at 100 °C (210	°F)	9.3 – 12.5 cSt (A	STM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	base oil substance(s)	Not available <3 %			
Section 10: Stability and Read	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous read	ctions	Under normal c	onditions of storage and use, ł	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away from	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials		Incomplete con	nbustion is likely to give rise to ses, including carbon monoxid	a complex mixture of airborn	e solid and liquid sulphuric acid and
10.6 Hazardous decomposition p			ganic and inorganic compound		
SECTION 11: Toxicological Inf	formation				
11.1 Information on toxicologica	l effects				
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
	LC 50 Inhalation due	ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro treated heavy paraffinic	LD 50 Dermal		Rabbit	> 5000 mg/kg	-
treated neavy paraminic	LD 50 Ora	al	Rat	>15000 mg/kg	_
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin					
Respiratory		No known significant effects or critical hazards.			
Mutagenicity			le to indicate product or any co	omponents present greater th	an 0.1 % are
		multigene or ge		avaraly hydrotrastad distillate	
Carcinogenicity			n this product is based on an s		
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sing		Not classified			
Specific target organ toxicity – rep	eated exposure				
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exposure		Not available			
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact		No known signi	ficant effects or critical hazard	S.	
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects					
General		No known significant effects or critical hazards.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			







Mutagenicity					
Teratogenicity		No known s	significant effects or critical haz	ards.	
Product / ingredient name					
Fertility effects		Not availab			
Other information Specific hazard		NOT AVAIIAD	le		
Section 12: Ecological Information		<b>N</b>			
12.1 Toxicity			ed to be harmful to aquatic org	janisms.	
12.2 Persistence and degradability			ntly biodegradable.		le titte og føde te og mendes og
12.3 Bioaccumulative potential			iation is unlikely to be significa ered mobile.	nt because of the low water solu	ibility of this product.
12.4 Mobility in soil 12.5 Results of PBT & vPvB assessment					
12.5 Results of PB1 & VPVB assessment		Not applica		n water curfaces causing physics	al damago to organisms
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physica	al damage to organisms.
Section 13: Disposal Consideration	าร				
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	tion 1 should be consulted for ar	ny available use-specific
Product Methods of disposal	Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes			
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.			
Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
Section 14: Transport Information					
International transport regulations					
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated
14.2 UN proper shipping name	_		_	_	_
14.3 Transport hazard class(es)	-		-	-	-
14.4 Packing group	_		-	-	_
14.5 Environmental hazards	No		No	No	No
Additional Information	_		-	-	_
14.6 Special precautions for user oils					
14.7 Transport in bulk according to An	nex   of MARPOL	73/78 and th	e IBC Code		
Section 15: Regulatory Informatio					
		slation speci	fic for the substance or mixtur	e EU Regulation (EC) No. 1907/	2006 (REACH)
Annex XIV – List of substances subject to Annex XIV Substances of very high concern	islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Annex XVII – Restrictions on the manufa on the market and use of certain danger mixtures and articles.	Not applicable				
International Lists National Inventory	Inventory name				
Australia	Australian Inventory of Chemical Substances (AICS) – Yes				
Canada		Domestic Substances List (DSL) – Yes Non-Domestic Substances List (NDSL) – No			
China	Inventory of Existing Chemical Substances in China (IECSC) – Yes				
China		inventory 0	a existing chemical substances		







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes			
Europe	European List of Notified Chemical Substances (ELINCS) – No			
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes			
Korea	Existing Chemicals List (ECL) – Yes			
New Zealand	New Zealand Inventory – Yes			
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes			
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes			
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).			
Section 16: Other Information				
Revision comments				
Legend to abbreviations				
ADR	European agreement concerning the international carriage of dangerous good by road.			
RID	Regulations agreement concerning the international carriage of dangerous good by rail.			
IMDG Code	International Maritime Dangerous Goods Code.			
ICAO	International Civil Aviation Organization.			
IATA	International Air Transport Association.			
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.			
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].			
SCBA	Self-Contained Breathing Apparatus.			
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].			
LC 50	Median lethal concentration.			
LD 50	Median lethal dose.			
PBT	Persistent, Bio accumulative and Toxic.			

GANDHAR OIL REFINERY (INDIA) LTD.				
Taloja Plant       Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.				
Silvassa Plant Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India				
Emergency / Info Phone No. Phone: +91-22-40635600 • Fax: +91-22-40635601				
Email info@gandharoil.com				





Section 1: Identification of the Substance / Mixtur	Section 1: Identification of the Substance / Mixture					
1.1 Product identifier						
roduct name Divyol MDE Oil 310						
Product description	Marine Diesel Engine Oil (SAE 30)					
Product type	Industrial Oil					
MARPOL Annex-1	****					
1.2 Identified uses	1					
Distribution of substance	Industrial					
Formulation & (re)packing of substance & mixtures	Industrial					
Manufacture of substance	Industrial					
Functional fluids	Industrial					
Section 2: Hazard Identification						
4-Extreme	Health	1				
3-High	Flammability	1				
2-Moderate	Reactivity	0				
1-Slight	Special	-				
Section 3: Compostion / Information on Ingredier	nts					
Product / Ingredient name	CAS No.: Not applicable for blende Distillates (Petroleum) mixture of h					
Section 4: First Aid Measures						
Inhalation exposure	Remove to fresh air & provide oxyg	gen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.					
Swallowing or other	Do not induce vomiting. In genera Get medical advice.	I no treatment is necessary unless large quantities are ingested.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.					
Protection first-aiders	Disconnecting electrical supply. Er available before entry into confine	nsure adequate ventilation and check that a safe and breathing area is d spaces.				
Section 5: Fire Fighting Measures						
5.1 Extinguishing media						
Unsuitable extinguishing media	Lise dry powder foam carbon dioxide. Do not use direct water and wet chemicals or water on the					
5.2 Special hazards arising from the substance or mixtu	re					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.					
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.					
5.3 Advice for firefighters						
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.					
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.					





6.1 Personal precautions, protective equipment and emergency procedures					
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.				
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6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.				
6.3 Methods and material for containment and cleaning	up				
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.				
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.				
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.				
Section 7: Handling and Storage					
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.				
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.				
7.3 Specific end use(s) – Recommendations	Not available				





Section 8: Exposure Controls / Personal Pro	otection				
The list of Identified Uses in Section 1 should be co	onsulted for any available use-specific information provided in the Exposure Scenario(s).				
8.1 Control parameters					
Occupational exposure limits					
Product / Ingredient name	Distillates, mixture of hydrocarbons				
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.				
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8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.				
Individual protection measures					
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.				
Eye / face protection	Recommended: Safety glasses with side shields.				
Skin protection					
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.				
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.				
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling				
	this product.				
Respiratory protection	this product. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.				
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Environmental exposure control	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.				
Environmental exposure control Section 9: Physical and Chemical Propertie	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.         es       Clear				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance Physical state	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.         Estention       Clear         Liquid       Liquid				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance Physical state Colour	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.         S       Clear         Liquid       Yellow				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance Physical state Colour Odor	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.         Emission       Clear         Liquid       Yellow         Petroleum odor       Petroleum odor				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance Physical state Colour Odor Odour threshold	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.         es       Clear         Liquid       Yellow         Petroleum odor       Not available				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance Physical state Colour Odor Odour threshold pH	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.         25       Clear         Liquid       Yellow         Petroleum odor       Not available         Not applicable       Not applicable				
Environmental exposure control Section 9: Physical and Chemical Propertie Appearance Physical state Colour Odor Odor Odour threshold pH Pour point	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.         Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.         estable       Clear         Liquid       Yellow         Petroleum odor       Not available         Not applicable       Not applicable         <-9 °C (ASTM D 97)				







Solubility (water)		Insoluble in wat	ter		
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210 °F)		9.3 – 12.5 cSt (A	STM D 445)		
Explosive properties	• ,	No data			
Oxidising properties		No data			
DMSO extractable compounds for	r hase oil substance(s)	Not available			
according to IP346		<3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ing	redients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	ctions	Under normal c	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away from	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials		Incomplete con particulates, ga	nbustion is likely to give rise to ses, including carbon monoxic	a complex mixture of airborn le, H <sub>2</sub> S, SO (sulphur oxides) or	e solid and liquid sulphuric acid and
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica	al effects				
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
	LC 50 Inhalation dusts and mists		Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro treated heavy paraffinic	LD 50 Dermal		Rabbit	> 5000 mg/kg	_
treated heavy paramine	LD 50 Ora	al	Rat	>15000 mg/kg	-
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory		Ĵ			
Sensation					
Skin					
Respiratory		No known significant effects or critical hazards.			
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity			n this product is based on an s	everely hydrotreated distillate	
calentogenicity			•		
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin		Not classified			
Specific target organ toxicity – rep	peated exposure				
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exposure		Not available			
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact			ificant effects or critical hazard	S.	
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects					
General		No known significant effects or critical hazards.			
Carcinogenicity		The base oil(s) i regarded as a ca	n this product is based on an s arcinogen.	everely hydrotreated distillate	. The product should not be





Mutagenicity						
Teratogenicity						
Product / ingredient name	<b>-</b>		significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		ula ilita y affetta in yana duyat	
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.	
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.				
Packaging	Packaging		sed non-chlorinated insulating	and heat transmission oils.		
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Substances of very high concern Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		





_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.			
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.		
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.		
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixtur	e					
1.1 Product identifier						
Product name	Divyol MDE Oil 312					
Product description	Marine Diesel Engine Oil (SAE 30)					
Product type	Industrial Oil					
MARPOL Annex-1	****					
1.2 Identified uses	I					
Distribution of substance	Industrial					
Formulation & (re)packing of substance & mixtures	Industrial					
Manufacture of substance	Industrial					
Functional fluids	Industrial					
Section 2: Hazard Identification	·					
4-Extreme	Health	1				
3-High	Flammability	1				
2-Moderate	Reactivity	0				
1-Slight	Special	-				
Section 3: Compostion / Information on Ingredier	its					
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.					
Section 4: First Aid Measures						
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician					
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.					
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.					
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.					
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.					
Section 5: Fire Fighting Measures	·					
5.1 Extinguishing media						
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.					
5.2 Special hazards arising from the substance or mixtu	5.2 Special hazards arising from the substance or mixture					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.					
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.					
5.3 Advice for firefighters						
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No personal risk or without suitable training.				
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.					





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Protect	ction
The list of Identified Uses in Section 1 should be consu	ulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the produc and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Properties	
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -12 °C (ASTM D 97)
Flash point	> 220 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available

Not available

Not available

0.88 max at 15 °C





Solubility (water)		Insoluble in water				
Partition coefficient (n-octanol/water)		Not available				
Decomposition temperature		No data				
Auto-ignition temperature		>300 °C				
Kinematic viscosity at 100 °C (210	°F)	9.3 – 12.5 cSt (A	STM D 445)			
Explosive properties	,	No data	,			
Oxidising properties		No data				
DMSO extractable compounds for	r base oil substance(s)	Not available				
according to IP346		<3 %				
Section 10: Stability and Rea	ctivity					
10.1 Reactivity		No specific test	data related to reactivity avail	able for this product or its ing	edients.	
10.2 Chemical stability		Stable under no	ormal conditions			
10.3 Possibility of hazardous rea	octions	Under normal c	conditions of storage and use, I	hazardous reactions will not o	ccur. Oxidising agent.	
10.4 Conditions to avoid		Keep away from	n extreme heat and oxidising a	gents.		
10.5 Incompatible materials		Incomplete con particulates, ga	nbustion is likely to give rise to ses, including carbon monoxic	a complex mixture of airborn de, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or	e solid and liquid sulphuric acid and	
10.6 Hazardous decomposition	products		ganic and inorganic compound			
SECTION 11: Toxicological In	formation					
11.1 Information on toxicologica	al effects					
Acute toxicity						
Product / ingredient name	Result		Species	Dose	Exposure	
	LC 50 Inhalation dusts and mists		Rat	>2.18mg/l	4 hours	
Distillate (Petroleum), hydro treated heavy paraffinic	LD 50 Dermal		Rabbit	> 5000 mg/kg	-	
treated neavy paramine	LD 50 Oral		Rat	>15000 mg/kg	-	
Irritation / corrosion						
Skin						
Eye		No known significant effects or critical hazards.				
Respiratory						
Sensation						
Skin		No known significant effects or critical hazards.				
Respiratory						
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.				
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.				
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.				
Specific target organ toxicity – sin	ale exposure	contains no ing	realent instea as toxic to repro			
Specific target organ toxicity – rep		Not classified				
Aspiration hazard	seated exposure	Aspiration hazard – Category 1				
Information on likely routes of exp			Not available			
Potential acute health effects						
Eye contact		Eye contact may cause redness and transient pain.				
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.				
Skin contact		No known significant effects or critical hazards.				
Ingestion		May be fatal if swallowed and enters airways.				
Potential chronic health effects		may be latal II S	wanowed and enters an ways.			
		No known signi	ificant effects or critical bazard	c		
General		No known significant effects or critical hazards. The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be				
Carcinogenicity				everely hydrotreated distillate	The product should not be	







Mutagenicity						
Teratogenicity						
Product / ingredient name	<b>-</b>		significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot	
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.	
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.				
Packaging	Packaging		sed non-chlorinated insulating	and heat transmission oils.		
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Substances of very high concern Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		





	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.			
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.		
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.		
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixtur	e					
1.1 Product identifier						
Product name	Divyol MDE Oil 315					
Product description	Marine Diesel Engine Oil (SAE 30)					
Product type	Industrial Oil					
MARPOL Annex-1	****					
1.2 Identified uses	1					
Distribution of substance	Industrial					
Formulation & (re)packing of substance & mixtures	Industrial					
Manufacture of substance	Industrial					
Functional fluids	Industrial					
Section 2: Hazard Identification						
4-Extreme	Health	1				
3-High	Flammability	1				
2-Moderate	Reactivity	0				
1-Slight	Special	-				
Section 3: Compostion / Information on Ingredier	nts					
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.					
Section 4: First Aid Measures						
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician					
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.					
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.					
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.					
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.					
Section 5: Fire Fighting Measures						
5.1 Extinguishing media						
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.					
5.2 Special hazards arising from the substance or mixtu	5.2 Special hazards arising from the substance or mixture					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.					
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.					
5.3 Advice for firefighters						
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No personal risk or without suitable training.				
Special protective equipment for firefighters	(SCBA) with a full face- piece opera helmets, protective boots and glow	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Prote	ection
The list of Identified Uses in Section 1 should be con-	sulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	<ul> <li>AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m<sup>3</sup> 15 minutes.</li> <li>Form: mist and fume [Air contaminant].</li> <li>AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m<sup>3</sup> 15 minutes.</li> <li>Form: mist and fume.</li> </ul>
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Properties	
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -12 °C (ASTM D 97)
Flash point	> 220 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available

≤ 0,1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)

Not available

Not available

0.88 max at 15 °C





Colubility (water)			tor		
Solubility (water) Partition coefficient (n actanol/water)		Insoluble in wat			
Partition coefficient (n-octanol/water)		Not available			
· · ·		No data			
Auto-ignition temperature	95)	>300 °C			
Kinematic viscosity at 100 °C (210	°F)	9.3 – 12.5 cSt (A	STM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity avail	able for this product or its ing	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal c	onditions of storage and use, I	hazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away from	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials		Incomplete con	nbustion is likely to give rise to ses, including carbon monoxic	a complex mixture of airborn le H.S. SO. (sulphur oxides) or	e solid and liquid sulphuric acid and
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica	al effects				
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
	LC 50 Inhalation due	sts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LD 50 Dermal		Rabbit	> 5000 mg/kg	-
treated heavy paraffinic	LD 50 Oral		Rat	>15000 mg/kg	-
Irritation / corrosion			·		
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin					
Respiratory		No known significant effects or critical hazards.			
nespiratory		No data availab			
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) i	n this product is based on an s	everely hydrotreated distillate	
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	gle exposure	Not classified			
Specific target organ toxicity – rep	peated exposure	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exp	oosure	Not available			
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact		No known significant effects or critical hazards.			
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects					
General		No known significant effects or critical hazards.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			
		-			







Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects	5					
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot	
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.	
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		feasible and authorisatio or waste su qualified w	Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal			
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.				
Packaging		Mineral-ba	sed non-chlorinated insulating	and heat transmission oils.		
Methods of disposal	Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
Section 14: Transport Information						
International transport regulations						
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
	Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed			
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances,		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	ply with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
РВТ	Persistent, Bio accumulative and Toxic.		

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Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixture				
1.1 Product identifier				
Product name	Divyol MDE Oil 320			
Product description	Marine Diesel Engine Oil (SAE 30)			
Product type	Industrial Oil			
MARPOL Annex-1	****			
1.2 Identified uses	1			
Distribution of substance	Industrial			
Formulation & (re)packing of substance & mixtures	Industrial			
Manufacture of substance	Industrial			
Functional fluids	Industrial			
Section 2: Hazard Identification				
4-Extreme	Health	1		
3-High	Flammability	1		
2-Moderate	Reactivity	0		
1-Slight	Special	-		
Section 3: Compostion / Information on Ingredier	its			
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.			
Section 4: First Aid Measures				
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician			
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.			
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.			
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.			
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.			
Section 5: Fire Fighting Measures				
5.1 Extinguishing media				
Unsuitable extinguishing media		kide. Do not use direct water and wet chemicals, or water on the I the fire. Use foam simultaneously on the surface.		
5.2 Special hazards arising from the substance or mixtu	re			
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.			
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.			
5.3 Advice for firefighters				
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No $\gamma$ personal risk or without suitable training.		
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.			





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			



Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Pro	otection
The list of Identified Uses in Section 1 should be co	onsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents of exposure to chemical agents). European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Propertie	S
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
pH	Not applicable
Pour point	< -15 °C (ASTM D 97)
Flash point	> 220 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available









Solubility (water)		Insoluble in wat	ter		
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	9.3 – 12.5 cSt (A	STM D 445)		
Explosive properties	,	No data	,		
Oxidising properties		No data			
DMSO extractable compounds for	r base oil substance(s)	Not available			
according to IP346		<3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity avail	able for this product or its ing	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal c	conditions of storage and use, I	hazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away from	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials		Incomplete con particulates, ga	nbustion is likely to give rise to ses, including carbon monoxic	a complex mixture of airborn de, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or	e solid and liquid sulphuric acid and
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica	al effects				
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
	LC 50 Inhalation due	sts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro treated heavy paraffinic	LD 50 Dermal		Rabbit	> 5000 mg/kg	-
treated neavy paramine	LD 50 Ora	al	Rat	>15000 mg/kg	-
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin					
Respiratory		No known significant effects or critical hazards.			
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	ale exposure	contains no ing	realent instea as toxic to repro		
Specific target organ toxicity – rep		Not classified			
Aspiration hazard	seated exposure	Aspiration hazard – Category 1			
Information on likely routes of exp	oosure	Not available			
Potential acute health effects	oosaic				
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact		No known significant effects or critical hazards.			
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects		may be latal II S	wanowed and enters an ways.		
		No known signi	ificant effects or critical bazard	c	
General		No known significant effects or critical hazards. The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be			
Carcinogenicity				everely hydrotreated distillate	The product should not be







Mutagonicity					
Mutagenicity					
	Teratogenicity		significant effects or critical haz	zards.	
	duct / ingredient name				
Fertility effects		Net southele	1.		
Other information Specific hazard		Not availab	le		
Section 12: Ecological Information					
12.1 Toxicity			ed to be harmful to aquatic org	janisms.	
12.2 Persistence and degradability			ntly biodegradable.		
12.3 Bioaccumulative potential			· · ·	nt because of the low water solu	ability of this product.
12.4 Mobility in soil			ered mobile.		
12.5 Results of PBT & vPvB assessment		Not applica			
12.6 Other adverse effects			n water. Spills may form a film o nsfer could also be impaired.	n water surfaces causing physica	al damage to organisms.
Section 13: Disposal Consideration	าร				
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	tion 1 should be consulted for ar	ny available use-specific
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal			
Hazardous waste	Hazardous waste				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste desi	gnation.		
Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
Section 14: Transport Information					
International transport regulations					
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated
14.2 UN proper shipping name	_		_	_	_
14.3 Transport hazard class(es)	-		_	-	-
14.4 Packing group	_		_	-	-
14.5 Environmental hazards	No		No	No	No
Additional Information	_		_	-	_
14.6 Special precautions for user oils				•	
14.7 Transport in bulk according to An		73/78 and th	e IBC Code		
Section 15: Regulatory Informatio		, s, , o and th			
		dation coord	fic for the substance or mixture	e Ell Pequilation (EC) No. 1007/	
Annex XIV – List of substances subject to authorisation Annex XIV Substances of very high concern		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed			
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.		Not applicable			
International Lists National Inventory		Inventory r	name		
Australia		Australian I	nventory of Chemical Substand	ces (AICS) – Yes	
Canada		Domestic Substances List (DSL) – Yes Non-Domestic Substances List (NDSL) – No			
China		Inventory of Existing Chemical Substances in China (IECSC) – Yes			
China		inventory o	in Existing Chemical Substances	$\sin \cos (100 - 100)$	







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes
Europe	European List of Notified Chemical Substances (ELINCS) – No
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes
Korea	Existing Chemicals List (ECL) – Yes
New Zealand	New Zealand Inventory – Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).
Section 16: Other Information	
Revision comments	
Legend to abbreviations	
ADR	European agreement concerning the international carriage of dangerous good by road.
RID	Regulations agreement concerning the international carriage of dangerous good by rail.
IMDG Code	International Maritime Dangerous Goods Code.
ICAO	International Civil Aviation Organization.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].
SCBA	Self-Contained Breathing Apparatus.
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].
LC 50	Median lethal concentration.
LD 50	Median lethal dose.
PBT	Persistent, Bio accumulative and Toxic.

GANDHAR OIL REFINERY (INDIA) LTD.			
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.		
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.		
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixture							
1.1 Product identifier							
Product name	Divyol MDE Oil 330						
Product description	Marine Diesel Engine Oil (SAE 30)						
Product type	Industrial Oil						
MARPOL Annex-1	****						
1.2 Identified uses							
Distribution of substance	Industrial						
Formulation & (re)packing of substance & mixtures	Industrial						
Manufacture of substance	Industrial						
Functional fluids	Industrial						
Section 2: Hazard Identification	·						
4-Extreme	Health	1					
3-High	Flammability	1					
2-Moderate	Reactivity	0					
1-Slight	Special	-					
Section 3: Compostion / Information on Ingredier	nts						
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.						
Section 4: First Aid Measures							
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician						
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.						
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.						
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.						
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.						
Section 5: Fire Fighting Measures							
5.1 Extinguishing media							
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.						
5.2 Special hazards arising from the substance or mixture							
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.						
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.						
5.3 Advice for firefighters							
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.						
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.						





6.1 Personal precautions, protective equipment and emergency procedures						
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.					
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.					
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.					
6.3 Methods and material for containment and cleaning	up					
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.					
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.					
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.					
Section 7: Handling and Storage						
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.					
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.					
7.3 Specific end use(s) – Recommendations	Not available					



Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Pro				
	nsulted for any available use-specific information provided in the Exposure Scenario(s).			
8.1 Control parameters				
Occupational exposure limits				
Product / Ingredient name	Distillates, mixture of hydrocarbons			
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.			
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.			
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.			
Individual protection measures				
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.			
Eye / face protection	Recommended: Safety glasses with side shields.			
Skin protection				
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.			
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.			
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.			
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.			
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.			
Section 9: Physical and Chemical Properties				
Appearance	Clear			
Physical state	Liquid			
Colour	Yellow			
Odor	Petroleum odor			
Odour threshold	Not available			
рН	Not applicable			
Pour point	< -18 °C (ASTM D 97)			
Flash point	> 230 °C			
Evaporation rate	Not available			
Flammability (solid, gas)	Not available			









Solubility (water)		Insoluble in wat	ter				
Partition coefficient (n-octanol/water)		Not available					
Decomposition temperature		No data					
Auto-ignition temperature		>300 °C					
Kinematic viscosity at 100 °C (210 °F)		9.3 – 12.5 cSt (ASTM D 445)					
Explosive properties		No data					
Oxidising properties		No data					
DMSO extractable compounds for	base oil substance(s)	Not available					
according to IP346		<3%					
Section 10: Stability and Rea	ctivity						
10.1 Reactivity		No specific test data related to reactivity available for this product or its ingredients.					
10.2 Chemical stability		Stable under normal conditions					
10.3 Possibility of hazardous reactions		Under normal conditions of storage and use, hazardous reactions will not occur. Oxidising agent.					
10.4 Conditions to avoid		Keep away from extreme heat and oxidising agents.					
10.5 Incompatible materials		Incomplete con	nbustion is likely to give rise to ses including carbon monovic	a complex mixture of airborn	e solid and liquid		
10.6 Hazardous decomposition	products	particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.					
SECTION 11: Toxicological In	formation						
11.1 Information on toxicologica	al effects						
Acute toxicity							
Product / ingredient name	Result		Species	Dose	Exposure		
	LC 50 Inhalation due	sts and mists	Rat	>2.18mg/l	4 hours		
Distillate (Petroleum), hydro	LD 50 Derr	nal	Rabbit	> 5000 mg/kg	_		
treated heavy paraffinic	LD 50 Ora	al	Rat	>15000 mg/kg	_		
Irritation / corrosion							
Skin							
Eye		No known signi	ficant effects or critical hazard	s.			
Respiratory		No known significant effects or critical hazards.					
Sensation							
Skin							
Respiratory		No known signi	ficant effects or critical hazard	S.			
		No data availab	le to indicate product or any c	omponents present greater th	an 0.1 % are		
Mutagenicity		multigene or ge	enotoxic.				
Carcinogenicity		The base oil(s) i	n this product is based on an s	everely hydrotreated distillate	2.		
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.					
Specific target organ toxicity – sin	gle exposure						
Specific target organ toxicity – repeated exposure		Not classified					
Aspiration hazard		Aspiration hazard – Category 1					
Information on likely routes of exposure		Not available					
Potential acute health effects							
Eye contact Eye conta		Eye contact ma	e contact may cause redness and transient pain.				
		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.					
Skin contact		No known significant effects or critical hazards.					
Ingestion		May be fatal if swallowed and enters airways.					
Potential chronic health effects							
General		No known siani	ficant effects or critical hazard	S.			
		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be					
Carcinogenicity regarded as a carcinogen.							






Mutagenicity							
Teratogenicity							
Product / ingredient name		No known :	significant effects or critical haz	ards.			
Fertility effects	5						
Other information Specific hazard		Not availab	ام				
Section 12: Ecological Information		Not availab					
		Net over eat		1			
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.			
12.2 Persistence and degradability			ntly biodegradable.		ula ilita y affetta in yana duyat		
12.3 Bioaccumulative potential			Bioaccumulation is unlikely to be significant because of the low water solubility of this product. Not considered mobile.				
12.4 Mobility in soil							
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience		
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.		
Section 13: Disposal Consideration	าร						
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific		
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal					
Hazardous waste		Yes					
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.					
Packaging	Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.				
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.					
Section 14: Transport Information							
International transport regulations							
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification		
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated		
14.2 UN proper shipping name	_		_	_	_		
14.3 Transport hazard class(es)	_		_	_	_		
14.4 Packing group	_		_	_	_		
14.5 Environmental hazards	No		No	No	No		
Additional Information	_		_	_	_		
14.6 Special processions for user all							
14.6 Special precautions for user oils		72/70 and th	a IRC Codo				
14.7 Transport in bulk according to An		, 3/ / 6 and th					
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007			
Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed					
Substances of very high concern Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles		Not applicable					
on the market and use of certain danger mixtures and articles.	ous substances,						
	ous substances,	Inventory I					
mixtures and articles.	ous substances,			res (AICS) – Yes			
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes				
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)			





_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.		
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Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601	
Email	info@gandharoil.com	





Section 1: Identification of the Substance / Mixture					
1.1 Product identifier					
Product name	Divyol MDE Oil 412				
Product description	Marine Diesel Engine Oil (SAE 40)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses	1				
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification					
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	its				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures					
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures					
5.1 Extinguishing media					
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.				
5.2 Special hazards arising from the substance or mixture					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No personal risk or without suitable training.			
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.		
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.		
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.		
6.3 Methods and material for containment and cleaning	up		
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.		
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.		
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.		
Section 7: Handling and Storage			
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.		
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.		
7.3 Specific end use(s) – Recommendations	Not available		



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Prote	ection
The list of Identified Uses in Section 1 should be cons	sulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	<ul> <li>AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m<sup>3</sup> 15 minutes.</li> <li>Form: mist and fume [Air contaminant].</li> <li>AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m<sup>3</sup> 15 minutes.</li> <li>Form: mist and fume.</li> </ul>
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for comparison with limit values for procedures for the assessment of exposure to chemical and biological agents) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Properties	
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -15 °C (ASTM D 97)
Flash point	> 230 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available







Solubility (water)		Insoluble in water			
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists LD 50 Dermal		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Oral		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin		No known significant effects or critical hazards.			
Eye					
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	igle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exposure		Not available			
Potential acute health effects					
Eve contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact			ificant effects or critical hazard		
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects					
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity			n this product is based on an s		. The product should not be





Mutagenicity							
Teratogenicity							
Product / ingredient name		No known :	significant effects or critical haz	ards.			
Fertility effects	5						
Other information Specific hazard		Not availab	ام				
Section 12: Ecological Information		Not availab					
		Net over eat		1			
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.			
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot		
12.3 Bioaccumulative potential			Bioaccumulation is unlikely to be significant because of the low water solubility of this product. Not considered mobile.				
12.4 Mobility in soil							
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience		
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.		
Section 13: Disposal Consideration	าร						
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific		
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal					
Hazardous waste		Yes					
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.					
Packaging	Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.				
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.					
Section 14: Transport Information							
International transport regulations							
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification		
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated		
14.2 UN proper shipping name	_		_	_	_		
14.3 Transport hazard class(es)	_		_	_	_		
14.4 Packing group	_		_	_	_		
14.5 Environmental hazards	No		No	No	No		
Additional Information	_		_	_	_		
14.6 Special processions for user all							
14.6 Special precautions for user oils		72/70 and th	a IRC Codo				
14.7 Transport in bulk according to An		, 3/ / 6 and th					
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007			
Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed					
Substances of very high concern Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles		Not applicable					
on the market and use of certain danger mixtures and articles.	ous substances,						
	ous substances,	Inventory I					
mixtures and articles.	ous substances,			res (AICS) – Yes			
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes				
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)			





_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	ply with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
РВТ	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.		
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.	
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.	
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601	
Email	info@gandharoil.com	





Section 1: Identification of the Substance / Mixture					
1.1 Product identifier					
Product name	Divyol MDE Oil 415				
Product description	Marine Diesel Engine Oil (SAE 40)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses	1				
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification					
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	its				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures					
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures					
5.1 Extinguishing media					
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.				
5.2 Special hazards arising from the substance or mixture					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No personal risk or without suitable training.			
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.		
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.		
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.		
6.3 Methods and material for containment and cleaning	up		
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.		
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.		
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.		
Section 7: Handling and Storage			
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.		
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.		
7.3 Specific end use(s) – Recommendations	Not available		



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Prote	ection
The list of Identified Uses in Section 1 should be cons	sulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	<ul> <li>AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m<sup>3</sup> 15 minutes.</li> <li>Form: mist and fume [Air contaminant].</li> <li>AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m<sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m<sup>3</sup> 15 minutes.</li> <li>Form: mist and fume.</li> </ul>
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for comparison with limit values for procedures for the assessment of exposure to chemical and biological agents) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Properties	
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -15 °C (ASTM D 97)
Flash point	> 230 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available







		Insoluble in water			
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Dermal LD 50 Oral		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	igle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
	Information on likely routes of exposure		Not available		
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact			ificant effects or critical hazard		
Ingestion			wallowed and enters airways.		
Potential chronic health effects					
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			





Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot	
12.3 Bioaccumulative potential			Bioaccumulation is unlikely to be significant because of the low water solubility of this product. Not considered mobile.			
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		feasible and authorisatio or waste su qualified w	Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal			
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	European waste catalogue (EWC) Waste Code 13 03 07*		Waste designation.			
Packaging	Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
			ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to Annex XIV – Substances of very high concern		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances,		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		





_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.			
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.		
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.		
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixtur	Section 1: Identification of the Substance / Mixture				
1.1 Product identifier					
Product name	Divyol MDE Oil 420				
Product description	Marine Diesel Engine Oil (SAE 40)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses	1				
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification					
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	nts				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures					
Inhalation exposure	Remove to fresh air & provide oxyc	gen, if breathing is difficult. Contact physician			
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures	·				
5.1 Extinguishing media					
Unsuitable extinguishing media		kide. Do not use direct water and wet chemicals, or water on the I the fire. Use foam simultaneously on the surface.			
5.2 Special hazards arising from the substance or mixtu	re				
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No r personal risk or without suitable training.			
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures			
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.		
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.		
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.		
6.3 Methods and material for containment and cleaning	up		
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.		
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.		
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.		
Section 7: Handling and Storage			
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.		
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.		
7.3 Specific end use(s) – Recommendations	Not available		





Section 8: Exposure Controls / Personal Pro	otection
-	onsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents of exposure to chemical agents) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the produc and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Propertie	S
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
pH	Not applicable
Pour point	< -15 °C (ASTM D 97)
Flash point	> 230 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available









		Insoluble in water			
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Dermal LD 50 Oral		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	igle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
	Information on likely routes of exposure		Not available		
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact			ificant effects or critical hazard		
Ingestion			wallowed and enters airways.		
Potential chronic health effects		, , , , , , , , , , , , , , , , , , , ,			
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			





Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot	
12.3 Bioaccumulative potential			Bioaccumulation is unlikely to be significant because of the low water solubility of this product. Not considered mobile.			
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		feasible and authorisatio or waste su qualified w	Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal			
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	European waste catalogue (EWC) Waste Code 13 03 07*		Waste designation.			
Packaging	Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
			ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to Annex XIV – Substances of very high concern		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances,		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

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Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixtur	e				
1.1 Product identifier					
Product name	Divyol MDE Oil 430	Divvol MDE Oil 430			
Product description	Marine Diesel Engine Oil (SAE 40)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses	1				
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification	<u> </u>				
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	its				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures	·				
Inhalation exposure	Remove to fresh air & provide oxyc	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician			
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures					
5.1 Extinguishing media					
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.				
5.2 Special hazards arising from the substance or mixtu	re				
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.				
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures						
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.					
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.					
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.					
6.3 Methods and material for containment and cleaning up						
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.					
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.					
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.					
Section 7: Handling and Storage						
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.					
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.					
7.3 Specific end use(s) – Recommendations	Not available					



Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Pro	otection
The list of Identified Uses in Section 1 should be co	onsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for comparison with limit spluce atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the produc and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Propertie	S
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -18 °C (ASTM D 97)
Flash point	> 250 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available









Solubility (water)		Insoluble in wa	ter		
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	nce(s) Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Dermal LD 50 Oral		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) i	in this product is based on an s	everely hydrotreated distillate	
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	igle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exp	oosure	Not available			
Potential acute health effects					
		Eye contact may cause redness and transient pain.			
· · ·			nhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.		
Skin contact     No known significant effects or critical hazards.					
Ingestion May be fatal if swallowed and enters airways.					
Potential chronic health effects					
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			





Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		ula ilita y affetta in yana duyat	
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.	
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal Product Methods Product Pr			subject to national/local iality legislation. Contaminated rectly, or by delivery to			
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.				
Packaging		Mineral-ba	sed non-chlorinated insulating	and heat transmission oils.		
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to Annex XIV – Substances of very high concern	islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed					
Annex XVII – Restrictions on the manufa	Not applicable					
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		





_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes				
Europe	European List of Notified Chemical Substances (ELINCS) – No				
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes				
Korea	Existing Chemicals List (ECL) – Yes				
New Zealand	New Zealand Inventory – Yes				
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes				
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes				
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).				
Section 16: Other Information					
Revision comments					
Legend to abbreviations					
ADR	European agreement concerning the international carriage of dangerous good by road.				
RID	Regulations agreement concerning the international carriage of dangerous good by rail.				
IMDG Code	International Maritime Dangerous Goods Code.				
ICAO	International Civil Aviation Organization.				
IATA	International Air Transport Association.				
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.				
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].				
SCBA	Self-Contained Breathing Apparatus.				
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].				
LC 50	Median lethal concentration.				
LD 50	Median lethal dose.				
РВТ	Persistent, Bio accumulative and Toxic.				

GANDHAR OIL REFINERY (INDIA) LTD.				
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.			
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.			
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601			
Email	info@gandharoil.com			





Section 1: Identification of the Substance / Mixtur	e				
1.1 Product identifier					
Product name	Divyol MDE Oil 440				
Product description	Marine Diesel Engine Oil (SAE 40)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses	1				
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification					
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	its				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures	-				
Inhalation exposure	Remove to fresh air & provide oxyg	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician			
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures	·				
5.1 Extinguishing media					
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.				
5.2 Special hazards arising from the substance or mixtu	re				
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.				
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures					
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.				
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.				
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.				
6.3 Methods and material for containment and cleaning	up				
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.				
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.				
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.				
Section 7: Handling and Storage					
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.				
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.				
7.3 Specific end use(s) – Recommendations	Not available				





Section 8: Exposure Controls / Personal Pro	tection
The list of Identified Uses in Section 1 should be co	nsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Section 9: Physical and Chemical Properties	
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -18 °C (ASTM D 97)
Flash point	> 240 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available









Solubility (water)		Insoluble in wa	ter		
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	nce(s) Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Dermal LD 50 Oral		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin					
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) i	in this product is based on an s	everely hydrotreated distillate	
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	igle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exp	oosure	Not available			
Potential acute health effects					
		Eye contact may cause redness and transient pain.			
· · ·			nhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.		
Skin contact     No known significant effects or critical hazards.					
Ingestion May be fatal if swallowed and enters airways.					
Potential chronic health effects		, , , , , , , , , , , , , , , , , , , ,			
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			





Mutagenicity							
Teratogenicity							
Product / ingredient name		No known s	significant effects or critical haz	ards.			
Fertility effects							
Other information Specific hazard		Not availab					
Section 12: Ecological Information		Not availab					
_		Notovport	ad to be bermful to equatic are	anieme			
12.1 Toxicity			ed to be harmful to aquatic org				
12.2 Persistence and degradability			ntly biodegradable.		ubilitu of the owned wot		
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.		
12.4 Mobility in soil							
12.5 Results of PBT & vPvB assessment		Not applica		a watar curfaces causing physic	al damage to excapience		
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physica	al damage to organisms.		
Section 13: Disposal Consideration	าร						
The information in this section contains information provided in the Exposure Sc		l guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific		
Product Methods of disposal Pr			subject to national/local iality legislation. Contaminated rectly, or by delivery to				
Hazardous waste		Yes					
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.					
Packaging		Mineral-ba	sed non-chlorinated insulating	and heat transmission oils.			
Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.						
Section 14: Transport Information							
International transport regulations							
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification		
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated		
14.2 UN proper shipping name	_		_	_	_		
14.3 Transport hazard class(es)	_		_	_	_		
14.4 Packing group	_		_	_	_		
14.5 Environmental hazards	No		No	No	No		
Additional Information	_		_	_	_		
14.6 Special processions for user all							
14.6 Special precautions for user oils		12/70 and th	a IPC Codo				
14.7 Transport in bulk according to An		5/76 and th					
Section 15: Regulatory Informatio		lotion	fe for the substance and t	Ell Dogulation (EC) No. 1007			
15.1 Safety, health and environmental Annex XIV – List of substances subject to Annex XIV			fic for the substance or mixture e components are listed	e EU Regulation (EC) No. 1907/	2006 (KEACH)		
Substances of very high concern		None of the	components are listed				
Annex XVII – Restrictions on the manufa on the market and use of certain danger mixtures and articles.	Not applicable						
International Lists National Inventory		Inventory r	name				
Australia		Australian I	nventory of Chemical Substanc	es (AICS) – Yes			
Canada	Canada			Domestic Substances List (DSL) – Yes			
China		Non-Domestic Substances List (NDSL) – No Inventory of Existing Chemical Substances in China (IECSC) – Yes					
China							





	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes			
Europe	European List of Notified Chemical Substances (ELINCS) – No			
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes			
Korea	Existing Chemicals List (ECL) – Yes			
New Zealand	New Zealand Inventory – Yes			
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes			
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes			
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).			
Section 16: Other Information				
Revision comments				
Legend to abbreviations				
ADR	European agreement concerning the international carriage of dangerous good by road.			
RID	Regulations agreement concerning the international carriage of dangerous good by rail.			
IMDG Code	International Maritime Dangerous Goods Code.			
ICAO	International Civil Aviation Organization.			
IATA	International Air Transport Association.			
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.			
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].			
SCBA	Self-Contained Breathing Apparatus.			
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].			
LC 50	Median lethal concentration.			
LD 50	Median lethal dose.			
РВТ	Persistent, Bio accumulative and Toxic.			

GANDHAR OIL REFINERY (INDIA) LTD.		
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.	
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.	
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601	
Email	info@gandharoil.com	





Section 1: Identification of the Substance / Mixtur	Section 1: Identification of the Substance / Mixture					
1.1 Product identifier						
Product name	Divyol MDE Oil 450					
Product description	Marine Diesel Engine Oil (SAE 40)					
Product type	Industrial Oil					
MARPOL Annex-1	****					
1.2 Identified uses						
Distribution of substance	Industrial					
Formulation & (re)packing of substance & mixtures	Industrial					
Manufacture of substance	Industrial					
Functional fluids	Industrial					
Section 2: Hazard Identification						
4-Extreme	Health	1				
3-High	Flammability	1				
2-Moderate	Reactivity	0				
1-Slight	Special	-				
Section 3: Compostion / Information on Ingredier	nts					
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.					
Section 4: First Aid Measures						
Inhalation exposure	Remove to fresh air & provide oxyc	gen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.					
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.					
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.					
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.					
Section 5: Fire Fighting Measures	·					
5.1 Extinguishing media						
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.					
5.2 Special hazards arising from the substance or mixtu	re					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.					
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.					
5.3 Advice for firefighters						
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.					
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.					





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	<ul> <li>Keep non-involved personnel away from the area of spillage.</li> <li>Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas.</li> <li>Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations.</li> <li>Note : Recommended measures are based on the most likely spillage scenarios for this material; howev local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.</li> </ul>			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Pro	tection			
The list of Identified Uses in Section 1 should be co	nsulted for any available use-specific information provided in the Exposure Scenario(s).			
8.1 Control parameters				
Occupational exposure limits				
Product / Ingredient name	Distillates, mixture of hydrocarbons			
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.			
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.			
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperatur control equipment should be used to avoid overheating.			
Individual protection measures				
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.			
Eye / face protection	Recommended: Safety glasses with side shields.			
Skin protection				
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.			
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.			
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.			
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the produc and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.			
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.			
Section 9: Physical and Chemical Properties	S			
Appearance	Clear			
Physical state	Liquid			
Colour	Yellow			
Odor	Petroleum odor			
Odour threshold	Not available			
pH	Not applicable			
Pour point	< -18 °C (ASTM D 97)			
Flash point	> 240 °C			
Evaporation rate	Not available           Not available			
Flammability (solid, gas)				

≤ 0,1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)

Not available

Not available

0.88 max at 15 °C





Solubility (water)			ter		
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210 °F)		12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for base oil substance(s) according to IP346		Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test data related to reactivity available for this product or its ingredients.			
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal conditions of storage and use, hazardous reactions will not occur. Oxidising agent.			
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name	LC 50 Inhalation due	ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LD 50 Derr		Rabbit	> 5000 mg/kg	4 110013
treated heavy paraffinic	LD 50 Den		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin					
Eye		No known signi	ificant effects or critical hazard	S.	
Respiratory					
Sensation					
Skin		No known sian	ificant effects or critical hazard	S.	
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) i	in this product is based on an s	everely hydrotreated distillate	
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	gle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exposure		Not available			
Potential acute health effects					
		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact		No known significant effects or critical hazards.			
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects					
General		No known significant effects or critical hazards.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			
		<b>J</b>	-		




Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		ula ilita y affetta in yana duyat	
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.	
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.				
Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.				
Methods of disposal			The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
Section 14: Transport Information						
International transport regulations						
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Substances of very high concern Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixture and articles		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	ply with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
РВТ	Persistent, Bio accumulative and Toxic.		

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Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixtur	e				
1.1 Product identifier					
Product name	Divyol MDE Oil 455				
Product description	Marine Diesel Engine Oil (SAE 40)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses	1				
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification	<u>I</u>				
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	nts				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures					
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures	•				
5.1 Extinguishing media					
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.				
5.2 Special hazards arising from the substance or mixture					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No			
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.				





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Prot	
	nsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Section 9: Physical and Chemical Properties	
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< -21 °C (ASTM D 97)
Flash point	> 240 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available



≤ 0,1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)

Not available

Not available

0.88 max at 15 °C





Solubility (water)		Insoluble in water			
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	12.5 – 16.3 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists LD 50 Dermal		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Oral		Rat	>15000 mg/kg	
	LD 30 01		nat	>15000 mg/kg	
Irritation / corrosion					
Skin		No known significant effects or critical hazards.			
Eye					
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	igle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exposure		Not available			
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact			ificant effects or critical hazard		
Ingestion		May be fatal if swallowed and enters airways.			
Potential chronic health effects					
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity			n this product is based on an s		. The product should not be





Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		ula ilita y affetta in yana duyat	
12.3 Bioaccumulative potential			ered mobile.	nt because of the low water solu	ibility of this product.	
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.				
Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.				
Methods of disposal			The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
Section 14: Transport Information						
International transport regulations						
	ADR / R	ID	ADN	IMO / IMDG Classification	ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to authorisation Annex XIV		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Substances of very high concern Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixture and articles		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.			
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.		
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.		
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		





Section 1: Identification of the Substance / Mixture					
1.1 Product identifier					
Product name	Divyol MDE Oil 560				
Product description	Marine Diesel Engine Oil (SAE 50)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses					
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification					
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	nts				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures					
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures					
5.1 Extinguishing media					
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.				
5.2 Special hazards arising from the substance or mixture					
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H <sub>2</sub> S, SO <sub>x</sub> (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No v personal risk or without suitable training.			
Special protective equipment for firefighters	(SCBA) with a full face- piece opera	ate protective equipment and self-contained breathing apparatus ated in positive pressure mode. Clothing for firefighters (including ves) conforming to European standard EN 469 will provide a basic level ts.			





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			





Section 8: Exposure Controls / Personal Pro	otection
-	onsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents for comparison with limit splues for the assessment of the second strategy - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the produc and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Propertie	S
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< 6 °C (ASTM D 97)
Flash point	> 210 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available









		1				
		Insoluble in water				
Partition coefficient (n-octanol/water)		Not available				
Decomposition temperature		No data	No data			
Auto-ignition temperature		>300 °C				
Kinematic viscosity at 100 °C (210	°F)	16.3 – 21.9 cSt (	(ASTM D 445)			
Explosive properties		No data				
Oxidising properties		No data				
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %				
Section 10: Stability and Rea	ctivity					
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.	
10.2 Chemical stability		Stable under no	ormal conditions			
10.3 Possibility of hazardous rea	octions	Under normal c	conditions of storage and use, I	nazardous reactions will not oc	cur. Oxidising agent.	
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.		
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic			
10.6 Hazardous decomposition	products	unidentified or	ganic and inorganic compound	ds. $\Pi_2$ 3, 30 x (surprior oxides) of	suprune aciu anu	
SECTION 11: Toxicological In	formation					
11.1 Information on toxicologica	al effects					
Acute toxicity						
Product / ingredient name	Result		Species	Dose	Exposure	
	LC 50 Inhalation due	sts and mists	Rat	>2.18mg/l	4 hours	
Distillate (Petroleum), hydro	LD 50 Dermal		Rabbit	> 5000 mg/kg	-	
treated heavy paraffinic	LD 50 Oral		Rat	>15000 mg/kg	-	
Irritation / corrosion			· · · · · · · · · · · · · · · · · · ·			
Skin						
Eye		No known significant effects or critical hazards.				
Respiratory						
Sensation						
Skin						
Respiratory		No known significant effects or critical hazards.				
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are				
		multigene or genotoxic.				
Carcinogenicity			n this product is based on an s			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.				
Specific target organ toxicity – sin	gle exposure	Not classified				
Specific target organ toxicity – rep	peated exposure	NOT CLASSIFIED				
Aspiration hazard		Aspiration hazard – Category 1				
Information on likely routes of exposure		Not available				
Potential acute health effects						
Eye contact		Eye contact may cause redness and transient pain.				
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.				
Skin contact		No known sign	ificant effects or critical hazard	S.		
Ingestion		May be fatal if s	wallowed and enters airways.			
Potential chronic health effects						
General		No known signi	ificant effects or critical hazard	s.		
Carcinogenicity			n this product is based on an s		The product should not be	
		-				





Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot	
12.3 Bioaccumulative potential			Bioaccumulation is unlikely to be significant because of the low water solubility of this product. Not considered mobile.			
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	European waste catalogue (EWC) Waste Code 13 03 07*		Waste designation.			
Packaging	Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
			ICAO / IATA Classification			
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to Annex XIV – Substances of very high concern		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances,		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		







_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes		
Europe	European List of Notified Chemical Substances (ELINCS) – No		
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes		
Korea	Existing Chemicals List (ECL) – Yes		
New Zealand	New Zealand Inventory – Yes		
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes		
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes		
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).		
Section 16: Other Information			
Revision comments			
Legend to abbreviations			
ADR	European agreement concerning the international carriage of dangerous good by road.		
RID	Regulations agreement concerning the international carriage of dangerous good by rail.		
IMDG Code	International Maritime Dangerous Goods Code.		
ICAO	International Civil Aviation Organization.		
IATA	International Air Transport Association.		
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.		
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].		
SCBA	Self-Contained Breathing Apparatus.		
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].		
LC 50	Median lethal concentration.		
LD 50	Median lethal dose.		
PBT	Persistent, Bio accumulative and Toxic.		

GANDHAR OIL REFINERY (INDIA) LTD.				
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Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.			
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601			
Email	info@gandharoil.com			





Section 1: Identification of the Substance / Mixture					
1.1 Product identifier					
Product name	Divyol MDE Oil 565				
Product description	Marine Diesel Engine Oil (SAE 50)				
Product type	Industrial Oil				
MARPOL Annex-1	****				
1.2 Identified uses					
Distribution of substance	Industrial				
Formulation & (re)packing of substance & mixtures	Industrial				
Manufacture of substance	Industrial				
Functional fluids	Industrial				
Section 2: Hazard Identification					
4-Extreme	Health	1			
3-High	Flammability	1			
2-Moderate	Reactivity	0			
1-Slight	Special	-			
Section 3: Compostion / Information on Ingredier	nts				
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.				
Section 4: First Aid Measures	·				
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician				
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.				
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.				
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.				
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.				
Section 5: Fire Fighting Measures					
5.1 Extinguishing media					
Unsuitable extinguishing media		kide. Do not use direct water and wet chemicals, or water on the I the fire. Use foam simultaneously on the surface.			
5.2 Special hazards arising from the substance or mixtu	re				
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.				
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.				
5.3 Advice for firefighters					
Special precautions for firefighters		oving all persons from the vicinity of the incident if there is a fire. No			
Special protective equipment for firefighters	(SCBA) with a full face- piece opera	ate protective equipment and self-contained breathing apparatus ated in positive pressure mode. Clothing for firefighters (including ves) conforming to European standard EN 469 will provide a basic level ts.			





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning	up			
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			





Section 8: Exposure Controls / Personal Pro	
	onsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical agents of exposure to procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Propertie	s
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
рН	Not applicable
Pour point	< 6 °C (ASTM D 97)
Flash point	> 210 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available









		Insoluble in water			
Partition coefficient (n-octanol/water)		Not available			
Decomposition temperature		No data			
Auto-ignition temperature		>300 °C			
Kinematic viscosity at 100 °C (210	°F)	16.3 – 21.9 cSt (	(ASTM D 445)		
Explosive properties		No data			
Oxidising properties		No data			
DMSO extractable compounds for according to IP346	r base oil substance(s)	Not available <3 %			
Section 10: Stability and Rea	ctivity				
10.1 Reactivity		No specific test	data related to reactivity availa	able for this product or its ingr	edients.
10.2 Chemical stability		Stable under no	ormal conditions		
10.3 Possibility of hazardous rea	octions	Under normal o	conditions of storage and use, I	nazardous reactions will not o	ccur. Oxidising agent.
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.	
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic		
10.6 Hazardous decomposition	products		ganic and inorganic compound		P
SECTION 11: Toxicological In	formation				
11.1 Information on toxicologica					
Acute toxicity					
Product / ingredient name	Result		Species	Dose	Exposure
rioduct/ingredient name		ts and mists	Rat	>2.18mg/l	4 hours
Distillate (Petroleum), hydro	LC 50 Inhalation dusts and mists		Rabbit	> 5000 mg/kg	4 110015
treated heavy paraffinic	LD 50 Dermal LD 50 Oral		Rat	>15000 mg/kg	_
	LD 30 01	ai	nat	213000 mg/kg	
Irritation / corrosion					
Skin		-			
Eye		No known significant effects or critical hazards.			
Respiratory					
Sensation					
Skin		No known significant effects or critical hazards.			
Respiratory					
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.			
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate.			
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.			
Specific target organ toxicity – sin	gle exposure				
Specific target organ toxicity – rep	• •	Not classified			
Aspiration hazard		Aspiration hazard – Category 1			
Information on likely routes of exp	oosure	Not available			
Potential acute health effects					
Eye contact		Eye contact may cause redness and transient pain.			
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.			
Skin contact			ificant effects or critical hazard		
Ingestion			wallowed and enters airways.		
Potential chronic health effects					
General		No known sign	ificant effects or critical hazard	S.	
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.			
		5	5		





Mutagenicity						
Teratogenicity						
Product / ingredient name		No known :	significant effects or critical haz	ards.		
Fertility effects						
Other information Specific hazard		Not availab	ام			
Section 12: Ecological Information		Not availab				
		Net over eat		1		
12.1 Toxicity			ed to be harmful to aquatic org	dillSillS.		
12.2 Persistence and degradability			ntly biodegradable.		u bilitu u ofi tibio unu o du ot	
12.3 Bioaccumulative potential			Bioaccumulation is unlikely to be significant because of the low water solubility of this product. Not considered mobile.			
12.4 Mobility in soil						
12.5 Results of PBT & vPvB assessment		Not applica		n water surfaces causing physic	al damage to expanience	
12.6 Other adverse effects			nsfer could also be impaired.	n water surfaces causing physic	al damage to organisms.	
Section 13: Disposal Consideration	าร					
The information in this section contains information provided in the Exposure Sc		d guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific	
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal				
Hazardous waste		Yes				
European waste catalogue (EWC) Waste	European waste catalogue (EWC) Waste Code 13 03 07*		Waste designation.			
Packaging	Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.				
Section 14: Transport Information						
International transport regulations						
			ICAO / IATA Classification			
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated	
14.2 UN proper shipping name	_		_	_	_	
14.3 Transport hazard class(es)	_		_	_	_	
14.4 Packing group	_		_	_	_	
14.5 Environmental hazards	No		No	No	No	
Additional Information	_		_	_	_	
14.6 Special processions for user all						
14.6 Special precautions for user oils		72/70 and th	a IRC Codo			
14.7 Transport in bulk according to An		, 3/ / 6 and th				
Section 15: Regulatory Informatio		elation and '	fe for the cubeter of any hit	a Ell Dogulation (EC) No. 1007		
Annex XIV – List of substances subject to Annex XIV – Substances of very high concern		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed				
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances,		Not applicable				
on the market and use of certain danger mixtures and articles.	ous substances,					
	ous substances,	Inventory I				
mixtures and articles.	ous substances,			res (AICS) – Yes		
mixtures and articles. International Lists National Inventory	ous substances,	Australian I Domestic S	name nventory of Chemical Substanc ubstances List (DSL) – Yes			
mixtures and articles. International Lists National Inventory Australia		Australian I Domestic S Non-Dome	name nventory of Chemical Substanc	)		





Former	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes
Europe	European List of Notified Chemical Substances (ELINCS) – No
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes
Korea	Existing Chemicals List (ECL) – Yes
New Zealand	New Zealand Inventory – Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes
	oly with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).
Section 16: Other Information	
Revision comments	
Legend to abbreviations	
ADR	European agreement concerning the international carriage of dangerous good by road.
RID	Regulations agreement concerning the international carriage of dangerous good by rail.
IMDG Code	International Maritime Dangerous Goods Code.
ICAO	International Civil Aviation Organization.
IATA	International Air Transport Association.
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].
SCBA	Self-Contained Breathing Apparatus.
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].
LC 50	Median lethal concentration.
LD 50	Median lethal dose.
PBT	Persistent, Bio accumulative and Toxic.

GANDHAR OIL REFINERY (INDIA) LTD.				
Taloja Plant	Plot No.10, MIDC, Main Road, Taloja, Taluka Panvel, District - Raigad 410208, India.			
Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.			
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601			
Email	info@gandharoil.com			





Section 1: Identification of the Substance / Mixture				
1.1 Product identifier				
Product name	Divyol MDE Oil 570			
Product description	Marine Diesel Engine Oil (SAE 50)			
Product type	Industrial Oil			
MARPOL Annex-1	****			
1.2 Identified uses				
Distribution of substance	Industrial			
Formulation & (re)packing of substance & mixtures	Industrial			
Manufacture of substance	Industrial			
Functional fluids	Industrial			
Section 2: Hazard Identification	·			
4-Extreme	Health	1		
3-High	Flammability	1		
2-Moderate	Reactivity	0		
1-Slight	Special	-		
Section 3: Compostion / Information on Ingredier	nts			
Product / Ingredient name	CAS No.: Not applicable for blended product. Distillates (Petroleum) mixture of hydro-treated hydrocarbons.			
Section 4: First Aid Measures				
Inhalation exposure	Remove to fresh air & provide oxygen, if breathing is difficult. Contact physician			
Skin contact	Remove contaminated clothing. Flush skin with water. Wash skin thoroughly with mild soap & water. If irritation occurs, call a physician.			
Swallowing or other	Do not induce vomiting. In general no treatment is necessary unless large quantities are ingested. Get medical advice.			
Eye contact	Rinse continuously with water for several minutes. Get medical attention, if irritation persists.			
Protection first-aiders	Disconnecting electrical supply. Ensure adequate ventilation and check that a safe and breathing area is available before entry into confined spaces.			
Section 5: Fire Fighting Measures				
5.1 Extinguishing media				
Unsuitable extinguishing media	Use dry powder, foam, carbon dioxide. Do not use direct water and wet chemicals, or water on the burning product. They may spread the fire. Use foam simultaneously on the surface.			
5.2 Special hazards arising from the substance or mixtu	re			
Hazards from the substance or mixture	Flammable liquids in pressurised containers may rupture and when exposed to heat, creating a highly flammable vapour cloud.			
Hazardous thermal decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.			
5.3 Advice for firefighters				
Special precautions for firefighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.			
Special protective equipment for firefighters	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face- piece operated in positive pressure mode. Clothing for firefighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.			





6.1 Personal precautions, protective equipment and emergency procedures				
For non-emergency personnel	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind / keep distance from source. In case of large spillages, alert occupants in downwind areas. Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave / current direction and speed) may significantly influence the choice of appropriate actions.			
For emergency responders	For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: Normal antistatic working clothes are usually adequate. Large spillages: Full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Note: Gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety helmet, antistatic non-skid safety shoes or boots. Goggles and / or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory Protection : A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S) a Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.			
6.2 Environmental precautions	Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities.			
6.3 Methods and material for containment and cleaning up				
Small spill	Stop leak if without risk. Absorb spilled product with suitable non-combustible materials.			
Large spill	Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe disposal.			
6.4 Reference to other sections	See Section 1: For emergency contact information. See Section 8: For information on appropriate personal protective equipment. See Section 13: For additional waste treatment information.			
Section 7: Handling and Storage				
7.1 Advice on general information – hygiene, storage	Obtain special instructions before use. Keep away from heat / sparks / open flames/hot surfaces. No smoking. Use and store only outdoors or in a well-ventilated area. Hazard of slipping on spilt product. Avoid release to the environment.			
7.2 Conditions for safe storage including any incompatibilities	Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations. Store separately from oxidising agents. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable / combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Protect from sunlight.			
7.3 Specific end use(s) – Recommendations	Not available			



Flammability limits in air (lower), % by volume

Flammability limits in air (upper), % by volume

Vapour pressure

Density Solubility (ies)



Section 8: Exposure Controls / Personal Pro	otection
The list of Identified Uses in Section 1 should be co	onsulted for any available use-specific information provided in the Exposure Scenario(s).
8.1 Control parameters	
Occupational exposure limits	
Product / Ingredient name	Distillates, mixture of hydrocarbons
Exposure limits values	AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume [Air contaminant]. AFS 2015:7 (Sweden, 12/2015). TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres – Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres – General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
8.2 Exposure control Appropriate engineering controls	Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.
Individual protection measures	
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse.
Eye / face protection	Recommended: Safety glasses with side shields.
Skin protection	
Hand protection	4 – 8 hours (breakthrough time): nitrile rubber.
Body protection	Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift.
Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	Respirator selection must be based on known or anticipated exposure levels, the hazards of the produc and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Environmental exposure control	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptab levels.
Section 9: Physical and Chemical Propertie	S
Appearance	Clear
Physical state	Liquid
Colour	Yellow
Odor	Petroleum odor
Odour threshold	Not available
pH	Not applicable
Pour point	< 6 °C (ASTM D 97)
Flash point	> 210 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available



≤ 0,1 hPa (20 °C) (Mineral oil, ASTM D 5191) (CONCAWE, 2010)

Not available

Not available

0.88 max at 15 °C





Solubility (water)		Insoluble in water				
Partition coefficient (n-octanol/water)		Not available				
Decomposition temperature		No data				
Auto-ignition temperature		>300 °C				
Kinematic viscosity at 100 °C (210 °F)		16.3 – 21.9 cSt (	(ASTM D 445)			
Explosive properties		No data				
Oxidising properties		No data				
DMSO extractable compounds for base oil substance(s) according to IP346		Not available <3 %				
Section 10: Stability and Rea	ctivity					
10.1 Reactivity		No specific test data related to reactivity available for this product or its ingredients.				
10.2 Chemical stability		Stable under no	ormal conditions			
10.3 Possibility of hazardous rea	ctions	Under normal conditions of storage and use, hazardous reactions will not occur. Oxidising agent.				
10.4 Conditions to avoid		Keep away fron	n extreme heat and oxidising a	gents.		
10.5 Incompatible materials			nbustion is likely to give rise to ses, including carbon monoxic			
10.6 Hazardous decomposition	products		particulates, gases, including carbon monoxide, $H_2S$ , $SO_x$ (sulphur oxides) or sulphuric acid and unidentified organic and inorganic compounds.			
SECTION 11: Toxicological In	formation					
11.1 Information on toxicologica						
Acute toxicity						
Product / ingredient name	Result		Species	Dose	Exposure	
Floduct/ ingredient hame	LC 50 Inhalation due	ts and mists	Rat	>2.18mg/l	4 hours	
Distillate (Petroleum), hydro			Rabbit	> 5000 mg/kg	4 110013	
treated heavy paraffinic	LD 50 Dermal LD 50 Oral		Rat	>15000 mg/kg		
	20 50 01		nat	>15000 mg/kg		
Irritation / corrosion						
Skin						
Eye		No known significant effects or critical hazards.				
Respiratory						
Sensation						
Skin		No known sian	ificant effects or critical hazard	S.		
Respiratory						
Mutagenicity		No data available to indicate product or any components present greater than 0.1 % are multigene or genotoxic.				
Carcinogenicity		The base oil(s) i	in this product is based on an s	everely hydrotreated distillate		
Reproductive toxicity		The product should not be regarded as a carcinogen. Contains no ingredient listed as toxic to reproduction.				
Specific target organ toxicity – sin	gle exposure					
Specific target organ toxicity – rep		Not classified				
Aspiration hazard		Aspiration hazard – Category 1				
Information on likely routes of exposure		Not available				
Potential acute health effects						
Eye contact		Eye contact may cause redness and transient pain.				
Inhalation		Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.				
Skin contact		No known significant effects or critical hazards.				
Ingestion		May be fatal if swallowed and enters airways.				
Potential chronic health effects						
General		No known sign	ificant effects or critical hazard	S.		
Carcinogenicity		The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.				
		5	5			





Mutagenicity					
Teratogenicity					
		No known s	significant effects or critical haz	ards.	
Other information Specific hazard		Not availab			
Section 12: Ecological Information		Not availab			
		Notovport	ad to be bermful to equatic are	anisms	
12.1 Toxicity			ed to be harmful to aquatic org		
12.2 Persistence and degradability			ntly biodegradable.		ula ilita yang du sat
12.3 Bioaccumulative potential		Bioaccumulation is unlikely to be significant because of the low water solubility of this product.			
12.4 Mobility in soil		Not considered mobile.			
12.5 Results of PBT & vPvB assessment		Not applica		a water curfaces causing physic	al damago to organisms
12.6 Other adverse effects		Insoluble in water. Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.			
Section 13: Disposal Consideration	าร				
The information in this section contains information provided in the Exposure Sc		l guidance. T	he list of Identified Uses in Sect	ion 1 should be consulted for ar	ny available use-specific
Product Methods of disposal		Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorisations, relevant contamination limits, safety regulations and air quality legislation. Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organisation, and/or prescribe composition limits and methods for recovery or disposal			
Hazardous waste		Yes			
European waste catalogue (EWC) Waste	Code 13 03 07*	Waste designation.			
Packaging		Mineral-based non-chlorinated insulating and heat transmission oils.			
Methods of disposal		The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.			
Section 14: Transport Information					
International transport regulations					
				ICAO / IATA Classification	
14.1 UN number	Not regul	ated	Not regulated	Not regulated	Not regulated
14.2 UN proper shipping name	_		_	_	_
14.3 Transport hazard class(es)	_		_	_	_
14.4 Packing group	_		_	_	_
14.5 Environmental hazards	No		No	No	No
Additional Information	_		_	_	_
14.6 Special processions for user all					
14.6 Special precautions for user oils		12/70 and th	a IPC Codo		
14.7 Transport in bulk according to An		5/76 and th			
Section 15: Regulatory Informatio			6 - fau tha an hat are a must i	- FU Degulation (FC) No. 1007	
15.1 Safety, health and environmental regulations / legis Annex XIV – List of substances subject to authorisation Annex XIV Substances of very high concern		islation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH) None of the components are listed			
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.		Not applicable			
International Lists National Inventory		Inventory name			
Australia		Australian Inventory of Chemical Substances (AICS) – Yes			
Canada		Domestic Substances List (DSL) – Yes Non-Domestic Substances List (NDSL) – No			
China		Inventory of Existing Chemical Substances in China (IECSC) – Yes			
China		inventory o	Existing Chemical Substances	in China (IECSC) – Yes	





_	European Inventory of Existing Commercial Chemical Substances (EINECS) – Yes			
Europe	European List of Notified Chemical Substances (ELINCS) – No			
Japan	Inventory of Existing and New Chemical Substances (ENCS) – Yes			
Korea	Existing Chemicals List (ECL) – Yes			
New Zealand	New Zealand Inventory – Yes			
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS) – Yes			
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory – Yes			
	ply with the inventory requirements administered by the governing country(s) uct are not listed or exempt from listing on the inventory administered by the governing country(s).			
Section 16: Other Information				
Revision comments				
Legend to abbreviations				
ADR	European agreement concerning the international carriage of dangerous good by road.			
RID	Regulations agreement concerning the international carriage of dangerous good by rail.			
IMDG Code	International Maritime Dangerous Goods Code.			
ICAO	International Civil Aviation Organization.			
IATA	International Air Transport Association.			
GHS	Globally Harmonized System of Classification and Labeling of Chemicals.			
CLP	Classification, Labelling and Packaging Regulation [Regulation (EC) No.1272/2008].			
SCBA	Self-Contained Breathing Apparatus.			
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006].			
LC 50	Median lethal concentration.			
LD 50	Median lethal dose.			
РВТ	Persistent, Bio accumulative and Toxic.			

GANDHAR OIL REFINERY (INDIA) LTD.			
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Silvassa Plant	Plot No. 2, Survey No. 678/1/3, Village Naroli, Near Naroli Check Post, Silvassa, Dadra & Nagar Haveli, Union Territory 396230, India.		
Emergency / Info Phone No.	Phone: +91-22-40635600 • Fax: +91-22-40635601		
Email	info@gandharoil.com		



#### Gandhar Oil Refinery (India) Limited

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, GMP Certified, NABL Accreditation and Government Recognized Three Start Export House

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#### Branch Offices and Depots

Pune | Baroda | Indore | Raipur | Udaipur | Jaipur | Delhi | Faridabad | Ghaziabad | Sonepat | Manesar | Haridwar | Patna | Hyderabad | Mangalore | Bangalore Guwahati | Varanasi | Hapur | Dharamtar | Jaigarh | Kandla | Surat (Magdalla) | Navlakhi | Krishnapatnam | Vishakapatnam | Gangavaram

#### Plants

Taloja | Silvassa | Sharjah