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## Material Safety Data Sheet

### 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

<b>Trade Name &amp; Synonyms</b>	DISOL	Cas No. 64742-47-8
<b>General Characteristics</b>	Petroleum hydrocarbon mixture	
<b>Hazard Classification</b>	Inflammable, Irritation	
<b>Application</b>	solvent	
<b>Manufacturer's Name &amp; Address</b>	Gandhar Oil Refinery India Limited 18 <sup>th</sup> Floor, DLH Park, S.V. Road, Goregaon W, Mumbai – Tel : +91-22-40635600	
<b>Supplier's Name</b>	Gandhar Oil Refinery India Limited	
<b>Revision Date</b>		

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical identity	Synonyms	CAS No.	Concentration
Hydrotreated light distillate	Hydrotreated light Petroleum	64742-47-8	100

### 3. HAZARDS IDENTIFICATION

<b>Urgent Risk-Harmfulness Information</b>	Liquid vapors may cause drowsiness and dizziness. Ingestion may result in lung problems. Inflammable even if this material is not classified as combustible material. Liquid vapors are heavier than air so that the vapors may spread on the ground. Thus, ignition is possible in a remote area. NFPA. Public health: 1 Fire: 2 Reaction: 0
<b>Eye Contact</b>	May cause severe irritation.
<b>Skin Contact</b>	May cause slight irritation.
<b>Inhalation</b>	Repeated contact may result in dry skin or cracked skin. Inhalation of vapors may cause irritation of the respiratory tract and of the central nervous system such as drowsiness, dizziness, headache, and nausea
<b>Ingestion</b>	Ingestion may result in lung problems.
<b>Chronic Symptom</b>	No carcinogenicity Industrial Safety and Health Act: Not defined Occupational Safety & Health Administration (OSHA): No National Toxicology Program (NTP): No

International Agency for Research on Cancer (IARC): No

#### 4. FIRST AID MEASURES

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<b>Eye Contact</b>	Open the eyelid and wash the eye with water. Take a rest for about 30 minutes. If the eye is bloodshot and the congestion maintains continuously, receive medical treatment.
<b>Skin Contact</b>	Wash the skin with soap and water while putting off the polluted clothes and shoes.
<b>Inhalation</b>	Expose to fresh air. If not recovered, seek medical aid.
<b>Ingestion</b>	Prevent vomiting. If vomiting occurs, keep head below hips to prevent obstruction of the airway. Immediately, receive medical treatment.
<b>Advice to Physician</b>	The central nervous system may be weakened. Prolonged exposure may result in dermatitis. There is the possibility of chemical pneumonia. If necessary, gastrolavage should be considered.

#### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	80°C
<b>Auto ignition</b>	About 230°C
<b>Temperature(°C)</b>	
<b>Explosion / Flammability</b>	About 0.5 - 5 % (V)
<b>limits in air</b>	
<b>Act on Safety Management of Dangerous Goods</b>	The third class of petroleum of the fourth class of hazardous substance
<b>Extinguishing Media</b>	Dry chemical, carbon dioxide, water, normal foam
<b>Extinguishing Method and Extinguisher</b>	Shut off all sources of fuel if possible, and use water to cool fire-exposed materials. Use water to cool fire-exposed tanks, containers, and structures. Fight horizontal tank fires from side of the tank. Wear air respirator or antigas mask in an airtight room or if needed. Use foam if exposed to heat or flame.
<b>Hazardous Substance</b>	Toxic substances created (e.g. CO)
<b>Created during Burning</b>	
<b>Unsuitable Extinguishing</b>	No data
<b>Media</b>	

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Human Body Protection</b>	Avoid inhalation and skin exposure. Change pollutant clothes to new one.
<b>Methods</b>	Wear air respirator or ventilate the air in an airtight room. Shut off source of exposure or remove source of fire.
<b>Environment Protection</b>	Prevent water pollution. If polluted, use absorber to remove pollutant.

<b>Methods</b>	Page 3
<b>Clean Up Methods</b>	Use sand or noninflammable absorber. Use water to dilute gas.
	Collect exposed materials in a proper container to dispose them.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Prevent skin contact, vapor inhalation, and eye contact. Ground all containers.	
	Empty containers may retain product residue including flammable or explosive vapors.	
	Thus, do not work near empty containers.	
<b>Storage</b>	Store the substance according to the current rules and regulations.	
	Store the substance in a cool and well-ventilated area.	
	Seal the storage container up and do not have a physical impact on the container.	
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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Appropriate engineering Controls</b>	Install local exhaust ventilation systems. If the materials may be explosive, explosion-proof facility shall be installed for the corresponding ventilation system.
	Check if the exposure is proper within the exposure criteria.
<b>Respiratory Protection</b>	Respirator is needed if this liquid is frequently used or excessively exposed. Respirator shall be certified by India Occupational Safety & Health Agency.
<b>Eye Protection</b>	Wear face shield that enables wearing two safety goggles, which protect from scattering materials or harmful liquids. Install spray washing system for eyes and emergency washing system in the shower type near the work field.
<b>Hand Protection</b>	Wear chemical-resistant gloves.
<b>Body Protection</b>	Wear chemical-resistant protective clothing.
<b>Sanitation</b>	No data
<b>Occupational exposure limit</b>	TWA(8hr) : 1,200 mg/m <sup>3</sup> (SK Recommendation)*

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Colorless	<b>Odor</b>	Unique hydrocarbon odor
<b>Ph</b>	No data	<b>Solubility In Water</b>	Less than 0.1 wt % of water
<b>Boiling point</b>	210~243°C	<b>Melting Point</b>	No data
<b>Explosion</b>	No data	<b>Oxidation</b>	No data
<b>Vapor Pressure</b>	0.55 mmHg at 37.8°C	<b>Specific Gravity</b>	0.816 (15.6°C)
<b>Distribution</b>	No data	<b>Vapor Density</b>	>1.0(air=1)
<b>Coefficient</b>			
<b>Viscosity</b>	About 2.2 cSt at 25°C	<b>Molecular weight</b>	No data

## 10. STABILITY AND REACTIVITY

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<b>Stability</b>	Stable in normal temperature and pressure, and for normal usage
<b>Conditions &amp; Materials to Avoid</b>	All sources of ignition and excessive heat, and strong oxidants.
<b>Material created during Degradation</b>	Thermal decomposition product. Toxic carbon compounds may be included (e.g. CO).
<b>Possibility of Hazardous Material Creation during Reaction</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute Oral Toxicity** Low toxicity, LD50 > 2000mg/kg (rat)

**Acute Dermal Toxicity**

**Acute Inhalation Toxicity** Low toxicity, LC50 > Vapor density almost to saturation / 1 hours (rat)

**Subacute Toxicity** No data

**Repeated Dose Toxicity** No data

**Mutagenicity** N/A

**Effect on Next Generation** N/A

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<b>(Reproductive Toxicity)</b>	
<b>Carcinogenicity</b>	Not defined
<b>Additional Advice</b>	Repeated exposure may cause problems of the central nervous system.

## 12. ECOLOGICAL INFORMATION

<b>Aquatic Toxicity and Ecotoxicity</b>	Low Toxic to fish, algae : LC/EC/IC50<=100mg/L
<b>Mobility</b>	Absorbed in soil. No mobility.
<b>Persistence/Degradability</b>	Easily degradable. Easily oxidized due to photochemistry reaction in air.
<b>Possibility of Accumulation in Animal Body</b>	Possible

## 13. DISPOSAL CONSIDERATIONS

<b>Regulations of Waste Management Act</b>	Waste liquid with oil of over 5% is classified as specified wastes.
<b>Disposal Method</b>	Dispose in a legal self-disposal system or through waste disposal company.
<b>Caution for Disposal</b>	Follow the detailed criteria of Wastes Control Act.

**14. TRANSPORT INFORMATION**

<b>Classification and Regulation According to</b>	Flammable liquid	
<b>Ship Transportation and Storage Rule of Hazardous Material of Ship Safety Act</b>		
<b>Caution during Transport Classification and Regulation According to</b>	Flammable liquid US Department fo Transportation Classification (49CFR)	
<b>Rule of Foreign Transportation</b>	Identification number Proper shipping name Class/Division Packing Group Contains OIL : III Emergency Response Guide No. : 128	: UN 1268 : Petroleum Distillates, n.o.s : Combustible liquid

IMDG

Not classified into hazardous material in IMDG.

IATA

Not classified into hazardous material in IATA.

**15. REGULATORY INFORMATION**

Regulation According to N/A

Industrial Safety and Health Act

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<b>Regulation According to the Substance Control Act of Another Department such as Toxic Substance Control Act</b>		
<b>Toxic Substance Control Act</b>	N/A.	
<b>High-Pressure Gas Safety Control Act</b>	N/A.	
<b>Regulation According to Foreign Laws</b>	Notification ALCS : Listed DSL : Listed INV(CN): Listed TSCA : Listed	

EINECS : Listed, 265-150-3

PICCS(PH) : Listed

SARA toxicity (311/312)

Delayed (Chronic) Health Hazard. Fire hazard

California Safe Drinking Water and Toxic Enforcement Act (Proposition 6) Not include the substances with carcinogenicity, mutagenicity, and reproductive toxicity.

## 16. OTHER INFORMATION

<b>Source</b>	Materials of our laboratories and India Occupational Safety & Health Agency
<b>Other References</b>	Wear respiratory protective device except the cases the storage tank is in a well-
	ventilated area and that the concentration of oxygen is 20% when the product vapor
	concentration is within the 1% of the minimum combustible concentration.
	This MSDS is made according to Article 41 of Industrial Safety and Health Act and
	Notification of Ministry of Labor. This material includes the information needed to handle
	the substance safely.
	This is not a criterion that determines commercial quality standard. Thus, contact the
	related team of Gandhar Oil Refinery India Limited for related information.