

Performance Par Excellence

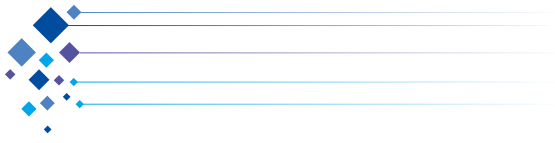
gandhar
Stay Ahead



Industrial Gear Box Oils

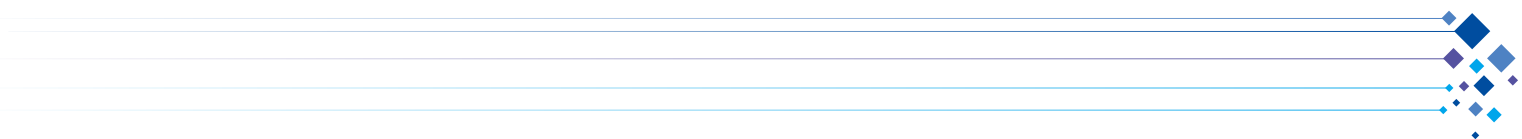
Industrial Oils

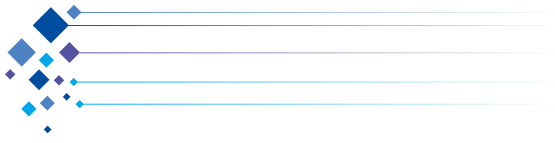
divyol
solutions within solutions



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WIDE RANGE OF INDUSTRIAL OILS



INDUSTRIAL GEAR BOX OILS

Gearing up for the toughest challenges

While contemporary gear boxes are light and compact, they are often challenged under severe operating conditions. Divyol industrial gear oils contain high-grade base fluids and special additives to help such gear boxes perform with minimal stress and maximum efficiency.



DIVYOL GEAR OILS XS

Applications:

Divyol Gear Oils XS is a series of fully synthetic heavy-duty industrial oils designed for spur, helical, bevel gear and bearing in industrial equipment as well as ships with heavy loads and under harsh environment conditions. These gear oils are especially recommended for applications that require long service life, get little maintenance or have a very difficult maintenance system. They are also suitable for reduction gearbox of conveyor, coal mill, extruder, blender mixer and other heavy equipment gearbox used in steel, cement, coal, power, petrochemical and paper industries. They serve well even when used for marine propeller, deck winch, crane, steering gear, the reducer of excavator, dragline, electric-wheeled self-dumping trucks and other equipment in open-pit coal mines.

Standards:

Each grade in the Divyol Gear Oils XS series conforms to performance standards of DIN 51517 Part III (2014); ISO 12925-1 Type CKC/CKD; AGMA EP 9005-EO2 (EP); AISE (US STEEL): 224; David Brown S1.53.101 and FLENDER GEAR BOXES – REVISION 9.

Advantages:

Divyol Gear Oils in the XS series have a high viscosity index which enables reliable and trouble-free operation even in harsh environmental conditions. Besides thermal stability they also have exceptional oxidation inhibition properties. Their unique anti-micro-pitting ability for gear sets reduces the risk of premature damage. Their excellent seal compatibility, next generation additives, load carrying capacity, adequate demulsibility and superior anti-rust, anti-corrosion properties add up into effective protection and therefore longer service life of the gear.

Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gear Oils XS				
			150	220	320	460	680
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	150	220	320	460	680
3	Viscosity index, min.	ASTM D 2270	150	154	160	164	168
4	Flash point, COC, °C, min.	ASTM D 92	240	240	250	250	250
5	Pour point, °C, max.	ASTM D 97	-45	-39	-33	-27	-27
6	4 ball EP test, weld load, kg, min.	ASTM D 2783	≥260	≥260	≥260	≥260	≥260
7	FZG micro pitting, fail load stage, GFT rating	FVA 54	>10/High	>10/High	>10/High	>10/High	>10/High
8	Copper corrosion 3 hrs. at 121 °C	ASTM D 130	1b	1b	1b	1b	1b
9	FZG scuffing test, fail load stage A/8.3/90	ASTM D 51354-2	>12	>12	>12	>12	>12
10	Rust protection, sea water	ASTM D 665	Complies	Complies	Complies	Complies	Complies
11	Foaming characteristics, seq. II, tendency/stability, mL/mL	ASTM D 892	0/0	0/0	0/0	0/0	0/0

The above properties are typical values and do not constitute specification of the product.

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DIVYOL GEAR OILS XD

Applications:

Divyol Gear Oils XD is a range of oil blends specially formulated for the lubrication of spur, helical, bevel gear and bearing in industrial equipment, as well as ships with heavy load and impact load under harsh environment and weather conditions. These oils are recommended for applications that require long service life, get little maintenance or have a very difficult maintenance system. They are widely applied in steel, cement, coal, power, petrochemical and papermaking areas, such as the reduction gearbox of conveyor, coal mill, extruder, blender mixer and other heavy equipment industry gearbox. These oils are also suitable for marine propeller, deck winch, crane, steering gear, etc., the reducer of excavator, dragline, electric-wheeled self-dumping trucks and other equipment in open-pit coal mines.

Standards:

Divyol Gear Oils XD meet the performance standards of DIN 51517 Part III (2014); ISO:12925-1 Type CKC/CKD; AGMA EP 9005-EO2 (EP); AISE (US STEEL): 224; David Brown S1.53.101 and Flender Gear Boxes – REVISION 9; and IS:8406/93.

Advantages:

The anti-wear properties of Divyol Gear Oils XD include resistance to oxidation, foam buildup, sludge and varnish formation. Their outstanding thermal stability reduces the formation of oxides at high temperatures. These oils have superior demulsibility and minimize emulsion formation in circulating systems which are usually subject to contamination with large quantities of water. They also have excellent seal compatibility. These properties combine to effectively protect gear system components against wear, rust and corrosion, even under severe high or low temperatures. They also sustain load carrying capacity and their unique anti-micro-pitting ability for gear sets reduces the risk of premature damage.

Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gear Oils XD			
			150	220	320	460
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	150	220	320	460
3	Viscosity index, min.	ASTM D 2270	95	95	95	95
4	Flash point, COC, °C, min.	ASTM D 92	230	230	240	250
5	Pour point, °C max.	ASTM D 97	-6	-6	-6	-6
6	Timken EP Test, Ok load, lbs min.	ASTM D 2782	75	80	80	80
7	FZG, pass load stage	FVA 54	12	12	12	12
8	Copper corrosion 3 hrs. at 121 °C	ASTM D 130	1b	1b	1b	1b
9	Rust protection, sea water	ASTM D 665	Complies	Complies	Complies	Complies
10	Demulsibility of EP oils, free water, mL	ASTM D 2711	Complies	Complies	Complies	Complies
11	Foaming characteristics, seq. II, tendency/stability, mL/mL	ASTM D 892	Complies	Complies	Complies	Complies

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DIVYOL GEAR OILS XF

Applications:

Divyol Gear Oils XF is a series of premium quality heavy duty gear oils designed to lubricate modern industrial gear boxes working under extreme pressure conditions. The XF grades are known to provide clean gear performance and excellent protection against micro pitting wear. These gear oils are recommended for splash or circulation lubrication of all types of enclosed gears especially for heavy loads, high speeds and high relative sliding velocities at elevated, ambient and operating temperatures in power, steel, cement and paper industries. These types of oil are recommended for the lubrication of bevel spur, helical and planetary gear boxes.

Standards:

Divyol Gear Oils XF have earned Siemens MD approval for Flender gear boxes Revision 15 and also conform to DIN 51517 (CLP) Part III (2014); AGMA 9005-F16 Anti scuff; AIST 224; David Brown S1.53.101 TYPE MA & E; ISO:12925-1 (CKC/CKD); GB 5903-2011 (CKD) and Fives Cincinnati EP Gear Oils performance standards.

Advantages:

Divyol Gear XF series oils offer excellent protection against rust and corrosion, enhanced oxidation stability and resistance to foaming. The blends' inherent friction modifying characteristic reduces the friction which in turn enhances gear efficiency and reduces power consumption. They provide excellent oxidation and thermal stability, effective resistance to micro pitting, enhanced anti-wear and extreme pressure properties. They also have excellent demulsibility and very low foaming tendency.

Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gear Oils XF				
			ISO VG 150	ISO VG 220	ISO VG 320	ISO VG 460	ISO VG 680
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Kinematic viscosity at 40 °C, ±10%, cSt	ASTM D 445	150	220	320	460	680
3	Viscosity index, min.	ASTM D 2270	95	95	95	90	95
4	Flash point, COC, °C, min.	ASTM D 92	230	230	230	250	240
5	Pour point, °C max.	ASTM D 97	-6	-9	-9	-9	-3
6	Copper corrosion at 100 °C	ASTM D 130	1b	1b	1b	1b	1b
7	FZG fail load stage (A 8.3/90)	DIN 51354 / ISO:14635	>12	>12	>12	>12	>12
8	FZG micro pitting resistance (90°C) fail load stage, GFT rating	FVA 54/7	>10 High	>10 High	>10 High	>10 High	>10 High
9	Timken OK load, lbs., min.	ASTM D 2782	60	60	60	60	60
10	Weld load, kg, min.	ASTM D 2783	250	250	250	250	250

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DIVYOL GEAR SPL OILS

Applications:

Divyol Gear SPL is a series of high performance extreme pressure gear oils primarily designed for heavy duty gear boxes. These gear oils have extreme pressure properties along with anti-wear property to enhance the performance level. They are recommended for splash or circulation lubrication of all types of enclosed gears, especially where operating conditions involve heavy loads, high speeds and high relative sliding velocities at elevated ambient and operating temperatures in industrial and marine applications. They can also be used to lubricate other heavily loaded parts and components such as couplings, transmission screws and low speed plain and roller bearings. As indicated, they can be used in oil-mist lubrication systems too.

Standards:

The blends in the Divyol Gear SPL range conform to performance standards of DIN 51517-3: 2009-06, AGMA EP 9005-E02, DIN51517 PART-III (CPL) and IS:8406-1993.

Advantages:

Divyol Gear SPL oils contain chemically active additives which react with the metal of the gear teeth to form an anti-welding film between them. The blend provides enhanced gear wear protection from micro pitting. It also provides improved protection from rust and wear to bearings and other gear box internals. These qualities along with its anti-oxidant properties offer longer service life of the machines.

Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gear SPL						
			68	100	150	220	320	460	680
1	Colour, max.	ASTM D 1500	3.0	3.0	3.5	4.0	4.5	4.5	8.0
2	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	95	107	154	220	340	450	675
3	Viscosity index, min.	ASTM D 2270	70	90	145	200	310	460	670
4	Pour point, °C max.	ASTM D 97	-3	-3	-6	-6	-6	-3	-3
5	Flash point, COC, °C, min.	ASTM D 92	210	210	230	230	235	245	220
6	Rust test	ASTM D 665	Complies	Complies	Complies	Complies	Complies	Complies	Complies
7	Copper corrosion at 100 °C, 3 hrs.	ASTM D 130	Not more severe than 1						

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DIVYOL GEAR OILS SP

Applications:

Divyol Gear SP Oils are premium quality lubricants fortified with sulphur-phosphorous type of EP additives. These oils are recommended for the lubrication of heavy-duty enclosed gear drives with circulation or splash lubrication systems operating under heavy or shock loading up to operating temperature of 110 °C. They are also recommended for systems with plain and roller bearings, sliding surfaces, chain drives, sprockets, flexible coupling employing splash, circulation or spray lubrication systems, requiring oil to withstand extreme pressures. They are not suitable for gear systems with brass, bronze and white metal components.

Standards:

Divyol Gear SP Oils conform to performance standards of IS:8406/93 (Reaffirmed 2016), AGMA STANDARD 250.04/9005-D94 and Cincinnati Machine – P-63, P-76, P-77, P-74, P-59.

Advantages:

Divyol Gear SP Oils have excellent anti-foam, anti-rust and anti-oxidation properties and thermal stability making them ideal for heavy shock loads operations. They have excellent low and high temperature resilience, providing consistent service even at temperatures up to 110 °C and may also be used for spray lubrication systems requiring extreme pressure. They also enhance high load carrying capabilities and reduce galling, scuffing and welding.

Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gear Oil SP						
			68	100	150	220	320	460	680
1	Colour, max.	Visual	3.0	3.0	3.5	4.0	4.5	4.5	8.0
2	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	68	100	150	220	320	460	680
3	Viscosity index, min.	ASTM D 2270	95	95	95	95	95	90	90
4	Flash point, COC, °C, min.	ASTM D 92	210	210	230	230	240	245	250
5	Timken OK load, min., in kg	ASTM D 2782	60	60	60	60	60	60	60
6	FZG gear fail load stage	DIN 51354	12	12	12	12	12	12	12
7	Rust test	ASTM D 665	Complies	Complies	Complies	Complies	Complies	Complies	Complies
8	Copper corrosion at 100 °C, 3 hrs.	ASTM D 130	Not more severe than 1						

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DIVYOL GEAR OILS ZN

Applications:

Divyol Gear Oils ZN are a series of specially formulated blends for the lubrication of multistage spur gear boxes (made of non-ferrous metal), chain drives and machine tool oiling systems with metallic moving parts that are prone to wear. Considering their end use, these need anti-rust, anti-wear and anti-foam type of lubricants for their effective lubrication. Divyol Gear Oils ZN can be used in hydraulic systems too.

Standards:

Divyol Gear Oils ZN are proprietary products. Each grade in the series has been specially formulated using highly refined high viscosity index mineral type base stocks and carefully selected additives.

Advantages:

Divyol Gear Oils ZN provide effective protection against rust and wear to system internals. The blends' anti-foaming properties ensure trouble-free functioning. Regular usage leads to longer service life of gear boxes. Additionally, these oils would also help reduce inventory as they can be used in various other locations.

Typical properties:

Sr. No.	Characteristics	Test Method	Divyol Gear Oil ZN					
			68	100	150	220	320	460
1	Appearance	Visual	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear	Bright and clear
2	Colour, max.	ASTM D 1500	2.5	3.0	3.0	3.5	4.5	5.5
3	Kinematic viscosity at 40 °C, cSt min.	ASTM D 445	69	100	150	220	320	460
4	Viscosity index, min.	ASTM D 2270	95	95	95	96	95	90
5	Flash point, COC, °C, min.	ASTM D 92	210	230	230	230	240	250
6	Pour point, °C max.	ASTM D 97	-6	-6	-6	-6	-6	-6
7	Rust test	ASTM D 665	Complies	Complies	Complies	Complies	Complies	Complies

The above properties are typical values and do not constitute specification of the product.

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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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