

High quality mineral industrial gear oils

TRANSMIL EXTRA XSP 150-1000

Transmil Extra XSP gear oils are top quality mineral industrial oils. The product was designed in order to provide gear mechanisms with maximum protection, even in extremely difficult oil lubrication conditions. Transmil Extra XSP oils are manufactured from high quality deeply-refined hydrogen-modified oil bases with use of special ashless additives that enhance oil's lubricating, anti-foaming and anti-emulsifying properties, prevent micropitting and guarantee oil's neutrality, as well as its compatibility with gear seal materials. Due to a special formulation of base oils and additive sets, Transmil Extra XSP oils, whenever compared with traditional gear oils, demonstrate higher resistance to thermal load, provide excellent protection against corrosion and do not have negative impact on effective operating of purifying filters, even in wet working conditions. The oils are also compatible with steel construction metals and other alloys of different metals.

Transmil Extra XSP oils are available in viscosity classes ranging from 150 to 1,000 and are intended for closed industrial toothed gears, including steel helical gears and gear wheels, angle bevel gears, planetary gears, screw gears and motoreducers. The oils are particularly recommended for mechanisms that are prone to micropitting, but they may also be used in gears that operate in highly corrosive conditions.

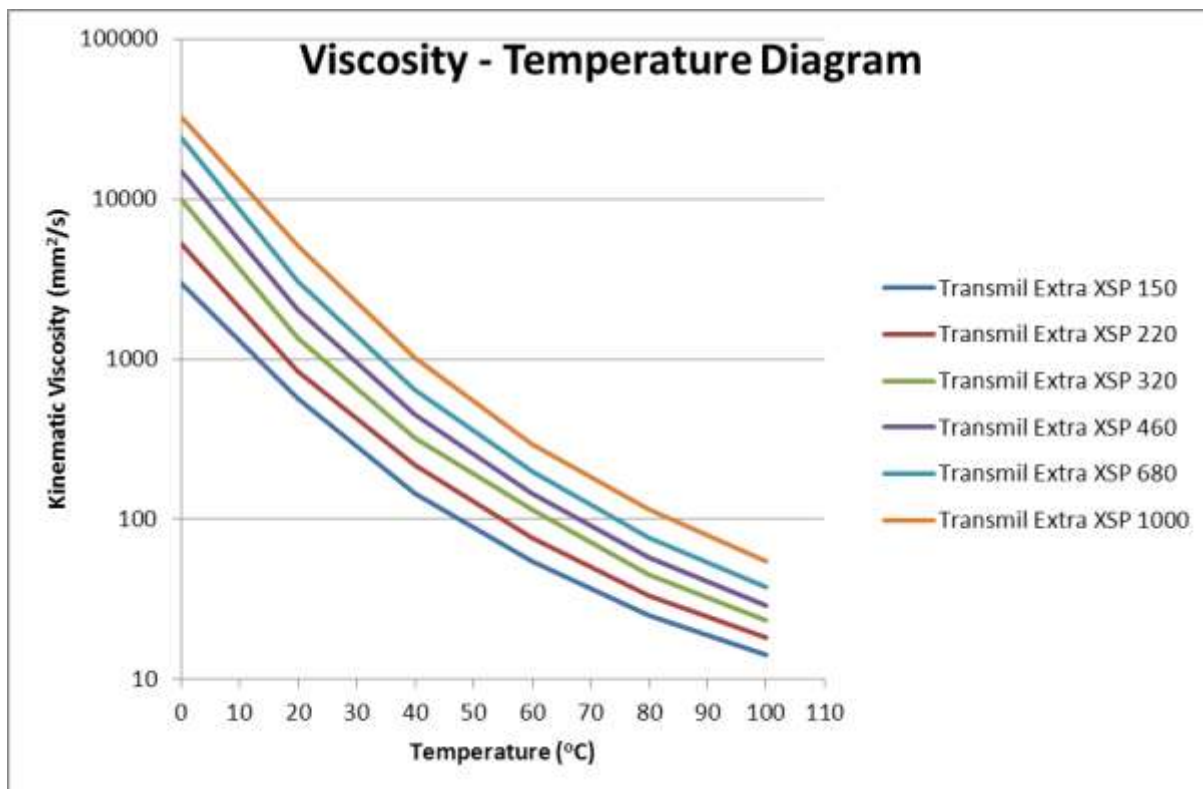
Characteristics:

- Excellent protection against micropitting and high anti-wear properties;
- prolonged service life of gears and bearings in closed toothed gears that operate in conditions of extreme load, changeable speed and temperature;
- optimal surface protection of lubricated parts;
- high anti-foaming properties;
- excellent anti-emulsifying properties;
- hydrolytic stability;
- protection against wear and tear and prolonged service life of parts used in lubricated systems.
- Excellent thermooxidation and high-temperature degradation resistance.
- Prolonged oil change intervals, reduction of inconveniences and costs related to oil changes.
- High resistance to rust and corrosion, as well as emulsification.
- Steady, trouble-free operation in high temperatures and water-access conditions.
- Excellent compatibility with soft and non-ferrous metals.
- Protection against filter clogging, including water environment.
- Lowered number of filter changes, lowered maintenance costs.

№	Requirements	Research Methods by	Unit	Values		
				150	220	320
1.	Kinematic viscosity at 40°C	ASTM D-445	mm ² /s	150	220	320
2.	Kinematic viscosity at 100°C	ASTM D-445	mm ² /s	14.7	18.9	23.7
3.	Pour point	ASTM D-5950	°C	-27	-27	-24
4.	Flash point	PN-EN ISO 2592	°C	244	260	254
5.	Anti-emulsifying properties	PN-86/C-04065	min	10	10	10
6.	Viscosity index	ASTM D-2270		94	94	93
7.	FZG test, A/16.6/90, A/8.3/90	DIN51354, ISO14635		>12 >12	>12 >12	>12 >12

№	Requirements	Research Methods by	Unit	Values		
				460	680	1000
1.	Kinematic viscosity at 40°C	ASTM D-445	mm ² /s	460	680	1000
2.	Kinematic viscosity at 100°C	ASTM D-445	mm ² /s	29.56	38.43	54.18
3.	Pour point	ASTM D-5950	°C	-21	-18	-18
4.	Flash point	PN-EN ISO 2592	°C	256	260	260
5.	Anti-emulsifying properties	PN-86/C-04065	min	10	10	10
6.	Viscosity index	ASTM D-2270		93	97	100
7.	FZG test, A/16.6/90, A/8.3/90	DIN51354, ISO14635		>12 >12	>12 >12	>12 >12

The above data consists of values typical for a production batch, which are not included in technical specifications, and are subject to change due to continual product research and development.

**Operation guidance:**

Transmil Extra XSP 150-1,000 oils are used in industrial gears, including bevel gears, angle gears, helical gears, planetary gears, worm gears and motoreducers, whenever it is recommended to provide them with oils whose lubrication layer demonstrates increased protection against load, thus preventing micropitting. Due to good thermooxidation resistance, the oils ensure long change intervals in increased temperatures (up to 120°C) for all modern industrial gears, as well as all other mechanisms where increased oil service life is desired.

Typical uses include:

- Press gearboxes in plastic, rubber and caoutchouc processing.
- Gear systems used in paper, steel, petroleum, textile, timber and construction industry and mining.

The products' properties guarantee meeting all operation requirements for main gears and gearboxes where using top quality oils is required.

Specifications, classifications:

- ISO VG 150-1000
- ISO L-CKC
- ISO- L-CKD
- DIN 51517-3 (2008/11) CLP
- AGMA 9005-D94
- US Steel 224
- David Brown S1 53.101

Approvals:

SIEMIENS/FLENDER Rev.13

Packaging:

1 tonna, 180 kg, 26 kg

Storage:

All containers should be stored in roofed areas. In case the barrels are kept in open-air areas, where they may be exposed to atmospheric factors such as rain, they should be placed in the horizontal position to prevent water access and labelling damage, preferably covered with a tarpaulin.

The product cannot be stored in temperatures lower than 0°C or higher than 60°C, nor can it be exposed to direct sunlight. If proper storage requirements are met, the period of minimum durability is 3 years.

Health, Industrial Safety and the Environment:

All safety information is included in the product's Material Safety Data Sheet, which contains detailed information concerning potential threats, safety precautions and first aid measures, as well as information concerning the product's impact on the environment and disposal considerations.

LOTOS Oil S.A. and the cooperating companies do not assume any responsibility for misuse of the product or for neglecting the given precautions. Should the product be used for purposes other than those enumerated above, seek advice at the local LOTOS Oil S.A. office beforehand.

The information provided in this data sheet is not intended to constitute an offer within the meaning of the Act of 23rd April 1964 - Civil Code. LOTOS Oil S.A. bears no responsibility for whatever effects of use (particularly in trade and investment decision-making) of information contained herein. Any data contained in the MSDS are typical process tolerance values and they are subject to change due to continual product research and development. Information provided in this document may undergo changes. LOTOS Oil S.A. is not responsible for the product availability.

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