Mobil

Spartan™ EP Series

Mobil Industrial , Japan

Gear Oil

Product Description

Spartan™ EP lubricants are a family of industrial extreme pressure gear lubricants. They are formulated with high quality mineral oils, which help reduce sludge formation helping to increase oil service life. Spartan EP oils contain a sulphur / phosphorus extreme pressure additive system that gives high load carrying ability and protection against wear. In addition these oils provide strong protection against corrosion of steel and copper containing alloys and resist foaming. Spartan EP oils have good water handling properties so that water rapidly separates from the oil for easy water elimination.

Spartan EP oils can be used in either splash or circulating systems. Spartan EP gear oils are suitable for use wherever industrial gear oil is required. Spartan EP grades are suitable for the lubrication of heavily loaded enclosed gear sets including spur, helical and bevel designs and provide protection in applications where shock loading occurs. Spartan EP may also be used in worm gears where specified. They may also be used for lubrication of plain bearings, and in rolling contact (anti-friction) bearings.

Features and Benefits

Spartan EP gear oils offer the following benefits:

Spartan EP oils enjoy a reputation for quality and consistency, as well as the ability to handle a variety of tough gear applications. They are manufactured with high quality mineral stocks and a specially chosen additive system. Spartan EP lubricants are manufactured under the highest level of quality assurance and control in our modern blending facilities.

- EP wear protection of gears and bearings
- Resistance to sludge formation leads to outstanding system cleanliness
- Very good oxidation resistance for long oil charge life
- Very good demulsibility to ease water removal

Applications

Spartan EP gear oils are used in a wide range of industrial spur, helical, bevel and steel-on-steel worm gearing.

Specific applications include:

- Drives for conveyers, agitators, dryers, fans, mixers, presses, pulpers, pumps, screens, extruders, oil well pumps
- Industrial bearings- journal and rolling contact, especially operating at low speeds and high loads

Specifications and Approvals

This product meets or exceeds the requirements of:	150	220	320	460
AGMA 9005-F16	X		X	X
DIN 51517-3:2018-09	X	X	X	X
ISO L-CKC (ISO 12925-1:2018)				X
ISO L-CKD (ISO 12925-1:2018)	X	X		

Properties and Specifications

Property	150	220	320	460
Grade	ISO 150	ISO 220	ISO 320	ISO 460
Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130	1B	1B	1B	1B
Density @ 15.6 C, kg/l, ASTM D4052	0.89	0.89	0.90	0.90
EP Properties, Timken OK Load, lb, ASTM D2782	65	65	65	65
Emulsion, Time to 37 mL Water, 82 C, min, ASTM D1401	30	30	30	30
FZG Scuffing, A/16.6/90, Fail Stage, Rating, DIN 51354 (mod)		12+	12+	12+
FZG Scuffing, A/8.3/90, Fail Stage, Rating, DIN 51354	12+	12+		12+
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1			12+	
Flash Point, Cleveland Open Cup, °C, ASTM D92	230	240	240	240
Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2783	47	48	48	48
Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2783	200	250	250	250
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	14.7	19	24.1	30.6
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	150	220	320	460
Pour Point, °C, ASTM D97	-24	-24	-24	-15
Rust Characteristics, Procedure B, ASTM D665	PASS	PASS	PASS	PASS
Viscosity Index, ASTM D2270	97	97	97	96

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com
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