



Spartan™ EP Series

Mobil Industrial , United States

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 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 gear oil is 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 most advanced 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 change 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   |

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

### Properties and Specifications

| Property  | 150     | 220     | 320     | 460     |
|---|---------|---------|---------|---------|
| Grade   | ISO 150 | ISO 220 | ISO 320 | ISO 460 |
| Kinematic Viscosity @ 40 C, mm <sup>2</sup> /s, ASTM D445         | 150     | 220     | 320     | 460     |
| Kinematic Viscosity @ 100 C, mm <sup>2</sup> /s, ASTM D445        | 14.7    | 19      | 24.1    | 30.6    |
| Viscosity Index, ASTM D2270                                       | 97      | 97      | 97      | 96      |
| Pour Point, °C, ASTM D97  | -24     | -24     | -24     | -15     |
| FZG Scuffing, A/8.3/90, Fail Stage, Rating, DIN 51354             | 12+     | 12+     | +12     | 12+     |
| FZG Scuffing, A/16.6/90, Fail Stage, Rating, DIN 51354 (mod)      |         | 12+     | +12     | 12+     |
| EP Properties, Timken OK Load, lb, ASTM D2782                     | 65      | 65      | 65      | 65      |
| Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2783       | 200     | 250     | 250     | 250     |
| Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2783 | 47      | 48      | 48      | 48      |
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130             | 1B      | 1B      | 1B      | 1B      |
| Rust Characteristics, Procedure B, ASTM D665                      | PASS    | PASS    | PASS    | PASS    |
| Emulsion, Time to 37 mL Water, 82 C, min, ASTM D1401              | 30      | 30      | 30      | 30      |
| Flash Point, Cleveland Open Cup, °C, ASTM D92                     | 230     | 240     | 240     | 240     |
| Density @ 15.6 C, kg/l, ASTM D4052                                | 0.89    | 0.89    | 0.90    | 0.90    |

### 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.as>  
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### Exxon Mobil Corporation

22777 Springwoods Village Parkway  
 Spring TX 77389

1-800-ASK MOBIL (275-6624)

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](http://www.exxonmobil.com)

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