Mobil

# Mobil SHC™ 500 Series

Mobil Industrial , Egypt

Hydraulic Oils

## Product Description

Mobil SHC™ 500 Series oils are exceptional performance hydraulic oils formulated from synthesised, wax-free hydrocarbon base fluids combined with a carefully engineered super-stabilised additive system. They are exceptionally high quality, wide-temperature, shear-stable hydraulic oils with controlled low-temperature pumpability properties and maximised anti-wear protection for high-pressure vane, piston and gear pumps. The products exhibit very high viscosity indexes contributing to their excellent low and high temperature performance making them an excellent choice for equipment that is subjected to a wide range of start-up and operating temperatures. The Mobil SHC 500 Series oils exhibit outstanding shear stability allowing their use in high-pressure, high-temperature operating environments for extended periods of time without the loss of critical lubrication characteristics.

The Mobil SHC 500 Series oils help provide long oil/filter life and optimum equipment protection, which can reduce both maintenance and product disposal costs. They were developed in conjunction with the major OEMs to meet the stringent requirements of severe hydraulic systems using high pressure, high output pumps as well as handling the critical requirements of other hydraulic system components such as close clearance servo-valves and the high accuracy numerically controlled (NC) machine tools. These products meet some of the most rigorous performance requirements of a wide range of hydraulic system and component manufacturers, using various multi-metallurgy designs, ensuring a single product with exceptional performance characteristics in a wide range of equipment. They are designed to work with systems operating under severe conditions where high levels of anti-wear and film strength protection are needed, yet they are formulated to work where non-anti-wear hydraulic oils are generally recommended.




Performance as described below*

* The energy efficiency design is a trademark of Exxon Mobil Corporation Energy efficiency relates solely to the fluid performance when compared with ExxonMobil's standard hydraulic fluids. The technology used allows up to 6 percent increase in hydraulic pump efficiency compared with Mobil DTE 20 Series when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on operating conditions and applications.

## Features and Benefits

The Mobil SHC 500 Series hydraulic oils exhibit outstanding low and high temperature performance helping to provide an extra margin of equipment protection above and beyond the capabilities of comparable mineral oil-based products. Their excellent oxidation resistance allows extension of oil and filter change intervals while assuring exceptionally clean systems and trouble-free operation. Their high level of anti-wear properties and excellent film strength characteristics result in exceptional equipment performance that helps prevent unplanned equipment breakdowns, and maximize equipment uptime, which can enable potential improvements in production capacity. Their controlled demulsibility permits the oils to work well in systems contaminated with small amounts of water yet readily separate large amounts of water.

| Features | Advantages and Potential Benefits |
|---|---|
| Design-Specific Synthetic Base stock | Helps extend service intervals<br>Cleaner system and reduced close-tolerance valve sticking compared to conventional products<br>Helps improve filterability |
| Exceptional Anti-wear | Helps reduce wear of components<br>Helps protect systems using various metallurgy |

| Features | Advantages and Potential Benefits |
|---|---|
| High Viscosity Index | Wide temperature range performance<br>Helps to ensure equipment protection at cold start-up temperatures<br>Helps protect system components at high operating temperatures |
| Outstanding Oxidation Stability | Helps provide long oil and equipment life, which can extend filter life |
| Excellent Corrosion Protection | Helps prevent internal hydraulic system corrosion<br>Helps reduce the negative effects of moisture in systems<br>Helps provide corrosion protection of multi-metallurgy component designs |
| Very Good Multi-metal Compatibility | Helps optimize inventory requirements |
| Meets a Wide Range of Equipment Requirements | One product can replace several helping to optimize inventory requirements and mitigate potential product misapplication |
| Excellent Air Separation Characteristics | Helps reduce foaming and it's negative effects |
| Controlled Demulsibility | Provides systems protection and lubrication where small quantities of moisture are present<br>Readily separates larger quantities of water |
| Innovative Keep Clean Properties | Helps reduce system deposits and potential sludging<br>Helps protect critical components such as servo-valves, improving system response and minimizing valve sticking |

## Applications

- Hydraulic systems prone to deposit build-up such as sophisticated Numerically Controlled (NC) machines, particularly where close clearance servo-valves are used
- Systems employing multi-metal component designs
- High pressure vane, piston and gear pumps
- Systems where cold start-up and / or very high operating temperatures are typical
- Where small amounts of water are unavoidable
- In systems containing gears and bearings
- Systems requiring a high degree of load-carrying capability and anti-wear protection
- Applications where thin oil-film corrosion protection is an asset such as in systems containing moisture

## Specifications and Approvals

| This product has the following approvals: | 524 | 525 | 526 |
|---|---|---|---|
| DENISON HF-0 | X | X | X |
| DENISON HF-1 | X | X | X |
| DENISON HF-2 | X | X | X |

## Properties and Specifications

| Property | 524 | 525 | 526 | 527 |
|---|---|---|---|---|
| Grade | ISO 32 | ISO 46 | ISO 68 | ISO 100 |
| Brookfield Viscosity @ -18 C, mPa.s, ASTM D2983 | 923 | 1376 | 2385 | 4500 |
| Copper Strip Corrosion, 3 h, 100 C, Rating, ASTM D130 | 1B | 1B | 1B | 1B |
| Density @ 15 C, kg/l, ASTM D4052 | 0.853 | 0.852 | 0.854 | 0.858 |
| Emulsion, Time to 40/37/3, 54 C, min, ASTM D1401 | 20 | 20 | 20 | |
| Emulsion, Time to 40/37/3, 82 C, min, ASTM D1401 | | | | 20 |
| FZG Scuffing, Fail Stage, DIN 51354 | 9 | 10 | 11 | 11 |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 234 | 238 | 240 | 243 |
| Foam, Sequence I, Stability, ml, ASTM D892 | 0 | 50 | 0 | 0 |
| Foam, Sequence I, Tendency, ml, ASTM D892 | 50 | 50 | 50 | 50 |
| Foam, Sequence II, Stability, ml, ASTM D892 | 0 | | 0 | 0 |
| Foam, Sequence II, Tendency, ml, ASTM D892 | 50 | 0 | 50 | 50 |
| Foam, Sequence III, Stability, ml, ASTM D892 | 0 | 0 | 0 | 0 |
| Foam, Sequence III, Tendency, ml, ASTM D892 | 50 | 50 | 50 | 50 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 6.4 | 8.54 | 11.52 | 15.94 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 32 | 46 | 68 | 100 |
| Pour Point, °C, ASTM D97 | -56 | -54 | -53 | -52 |
| Rust Characteristics, Procedure B, ASTM D665 | PASS | PASS | PASS | PASS |
| Viscosity Index, ASTM D2270 | 144 | 154 | 158 | 160 |

**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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You can always contact our Technical Help Desk engineers on Mobil lubricants and services related questions: https://www.global.mobil.com/en/contact-us

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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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