



Mobil SHC™ 500 Series

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.

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
	Cleaner system and reduced close-tolerance valve sticking compared to conventional products
	Helps improve filterability
Exceptional Anti-wear	Helps reduce wear of components
	Helps protect systems using various metallurgy
High Viscosity Index	Wide temperature range performance
	Helps to ensure equipment protection at cold start-up temperatures
	Helps protect system components at high operating temperatures
Outstanding Oxidation Stability	Helps provide long oil and equipment life, which can extend filter life
	Helps prevent internal hydraulic system corrosion

Excellent Corrosion Protection

Helps reduce the negative effects of moisture in systems

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 its negative effects

Controlled Demulsibility

Provides systems protection and lubrication where small quantities of moisture are present

Readily separates larger quantities of water

Innovative Keep Clean Properties

Helps reduce system deposits and potential sludging

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

Mobil SHC 500 Series has the following builder approvals:

	524	525	526	527
Denison HF-0	X	X	X	
Denison HF-1	X	X	X	
Denison HF-2	X	X	X	

Typical Properties

Mobil SHC 500 Series	524	525	526	527
ISO Viscosity Grade	32	46	68	100
Viscosity, ASTM D 445				
cSt @ 40° C	32	46	68	100
cSt @ 100° C	6.4	8.54	11.52	15.94
Brookfield Viscosity @ -18° C, ASTM D 2983, cP	923	1376	2385	4500
Viscosity Index, ASTM D 2270	144	154	158	160
Density 15° C, ASTM D 4052, kg/L	0.852	0.8514	0.8535	0.8576
Copper Strip Corrosion, ASTM D 130, 3 hours @ 100° C	1B	1B	1B	1B
Rust Characteristics, ASTM D 665B	Pass	Pass	Pass	Pass
FZG Gear Test, DIN 51354, Fail Stage	11	11	11	11
Pour Point, °C, ASTM D 97	-56	-54	-53	-52
Flash Point, °C, ASTM D 92	234	238	240	243
Foam Sequence I II III ASTM D 893 ml	50/0	50/0	50/0	50/0

Test Sequence I, II, III, ASTM D 938, III	50/0	50/0	50/0	50/0
Demulsibility, ASTM D 1401, 82C, minutes to 3ml emulsion	20	20	20	20

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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ExxonMobil Lubricants Private Limited
4th Floor Building 10, Tower C, DLF Cyber City, Gurgaon, Haryana 122002 India

+91 124 6581 601

<http://www.exxonmobil.com>

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. ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.

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