Mobil SHC Aware™ HS Series

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ExonMobil

Mobil SHC Aware™ HS Series

ExxonMobil Marine, United States

Product Description

The Mobil SHC™ Aware™ HS (Hydraulic System) Series meets US Vessel General Permit (VGP) 2013 for environmentally acceptable lubricants* and EU Ecolabel** requirements, while offering excellent protection in hydraulic systems. Biodegradable, minimally toxic and non-bioaccumulative, these lubricants can be used in hydraulic systems where spills or leakage could result in adverse environmental impact.

Based on proprietary Mobil Hydraulic Fluid Durability (MHFD) testing***, Mobil SHC Aware HS Series hydraulic lubricants keep hydraulic systems cleaner for longer — for greater durability under the harshest conditions, reduced machine maintenance and increased productivity through improved machine availability.

Mobil SHC Aware Hydraulic HS lubricants also have excellent shear stability for longer oil life and outstanding resistance to viscosity breakdown, as well as excellent thermal and oxidation stability. The overall balanced formulation supports reduced maintenance downtime and costs by contributing to system cleanliness and deposit reduction, enabling longer oil life. Exceptional protection helps lead to longer component life. Mobil SHC Aware HS oils' exceptional load-carrying and antiwear properties protect components against wear, which can lead to superior component life. Their shear-stable, high viscosity index also provides optimal protection over a wide temperature range.

The line includes Mobil SHC Aware HS 22, 32, 46 and 68 grades. These lubricants are suitable for a wide range of marine applications including hydraulic deck equipment, winches, ramps, hatches, doors, cranes and other hydraulic pumps.

Features and Benefits

Mobil SHC Aware HS oils offer:

- An all-around balanced formulation enabling protection and performance at a wider operating temperature
- Excellent cleanliness and deposit control
- Superior low-temperature startup
- Outstanding demulsibility, which eases water removal in critical applications

Mobil SHC Aware HS oils can help:

- Deliver excellent wear protection
- Maximise time between dry docks, helping to reduce operating and maintenance costs
- Enable compliance with US EPA Vessel General Permit and EU Ecolabel certification
- Lower potential remediation and cleanup costs caused by spills or leakage

Applications

Mobil SHC™ Aware™ HS high-performance hydraulic oils help provide optimal performance under high load and high pressures.

Recommended applications include:

- Hydraulic pumps
- · Hydraulic deck equipment, marine and mobile equipment operating in environmentally sensitive areas
- Cranes, Winches, ramps, hatches, doors or other systems where readily biodegradeable and minimally toxic fluids may be required
- Steering gear systems

Specifications and Approvals

| This product has the following approvals: | MOBIL SHC AWARE HS 22 | MOBIL SHC AWARE HS 32 | MOBIL SHC AWARE HS 46 | MOBIL SHC AWARE HS 68 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| Denison HF-1 | | X | X | X |
| Denison HF-2 | | Х | Х | X |
| Denison HF-6 | | Х | Х | X |
| Eaton Corporation Brochure No. 03-401-2010, Rev 1 | | × | | × |

| This product meets or exceeds the requirements of: | | | | |
|--|---|---|---|---|
| US EPA VGP:2013 | X | X | X | Х |

Properties and Specifications

| Property | MOBIL SHC AWARE HS 22 | MOBIL SHC AWARE HS 32 | MOBIL SHC AWARE HS 46 | MOBIL SHC AWARE HS 68 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Grade | ISO 22 | ISO 32 | ISO 46 | ISO 68 |
| Acute Algae Toxicity, EC50, 72 h, mg/l, OECD 201 | | | >100 | |
| Acute Algae Toxicity, EC50/72h, mg/l, OECD 201 | >100 | >100 | | >100 |
| Acute Daphnia Toxicity, EC50/48h, mg/l, OECD 202 | >100 | >100 | >100 | >100 |
| Acute Fish Toxicity, LC50/96h, mg/l, OECD 203 | >100 | >100 | >100 | >100 |
| Density @ 15.6 C, g/ml, ASTM D4052 | 0.8842 | 0.8752 | 0.8818 | 0.8863 |
| FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1 | | >12 | >12 | >12 |
| Flash Point, Cleveland Open Cup, °C, ASTM D92 | 185 | 185 | 185 | 185 |
| Kinematic Viscosity @ 100 C, mm2/s, ASTM D445 | 5.1 | 6.5 | 8.7 | 11.8 |
| Kinematic Viscosity @ 40 C, mm2/s, ASTM D445 | 22 | 32 | 46 | 68 |
| Pour Point, °C, ASTM D97 | -57 | -48 | -48 | -48 |
| Rust Characteristics, Procedure A, 24 h, ASTM D665 | | | | Pass |
| Rust Characteristics, Procedure B, ASTM D665 | Pass | | | |
| Rust Test Proc A, ASTM D665 | | Pass | Pass | |

| Property | MOBIL SHC AWARE HS 22 | MOBIL SHC AWARE HS 32 | MOBIL SHC AWARE HS 46 | MOBIL SHC AWARE HS 68 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Shake-Flask Test, CO2 Evolution (Mod. Sturm), %, OECD 301B | >60 | >60 | >60 | >60 |
| Viscosity Index, ASTM D2270 | 154 | 167 | 176 | 174 |

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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ExxonMobil Marine Limited

Ermyn Way Leatherhead, Surrey United Kingdom KT22 8UX

http://www.exxonmobil.com

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.

