

Mobil SHC™ Aware™ HS Series hydraulic oils

Environmentally acceptable* lubricants that meet EU Ecolabel and US EPA VGP 2013



Energy lives here™

Product features

Mobil SHC™ Aware™ HS Series high-performance hydraulic oils are a line of Environmentally Acceptable Lubricants (EAL)* that meet US EPA Vessel General Permit (VGP) environmental requirements. They can offer:

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

Enables ultra keep-clean performance

OEM approvals

Mobil SHC Aware HS Series hydraulic fluids meet or exceed the following OEM specifications:†

Denison HF-1, HF-2 and HF-6	✓
Eaton-Vickers (35VQ25) pump test	✓

*Environmentally acceptable lubricants are defined in the US Environmental Protection Agency's Vessel General Permit (VGP) as lubricants that are biodegradable, minimally toxic and non-bioaccumulative.

†Meets for ISO grades 32, 46 and 68

‡When compared with conventional mineral lubricants.

§US EPA VGP 2013 based on EU Ecolabel.

Potential benefits

Mobil SHC Aware HS Series oils help:‡

- 1 Deliver excellent wear protection
- 2 Maximise time between dry docks, helping to reduce operating and maintenance costs
- 3 Enable vessels to comply with US EPA Vessel General Permit
- 4 Lower potential remediation and cleanup costs caused by spills or leakage

Performance

Mobil SHC™ Aware™ HS 22, 32, 46 and 68 hydraulic oils meet the following specifications:§

- US EPA Vessel General Permit (VGP) 2013
- EU Ecolabel

Mobil SHC™ Aware™ HS Series

Ultra keep-clean performance for increased equipment life with minimum downtime

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

Mobil SHC Aware Hydraulic HS Series 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.

Recommended applications

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

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.

Meets Eaton-Vickers and Denison HF-1, HF-2 and HF-6‡

Typical properties

Mobil SHC Aware HS Series				
ISO Viscosity Grade	22	32	46	68
Viscosity, ASTM D 445	22	32	46	68
cSt @ 40°C	22	32	46	68
cSt @ 100°C	5.1	6.5	8.7	11.8
Viscosity Index, ASTM D 2270	154	167	176	174
Density @ 15°C, ASTM D4052, g/ml	0.8842	0.8752	0.8818	0.8863
FZG Gear Test, A/8.3/90, DIN ISO 14635-1, Fail Load Stage		>12	>12	>12
Rust Characteristics, procedure B, ASTM D 665	pass	pass	pass	pass
Pour Point, ASTM D 97, °C	- 57	- 48	- 48	- 51
Flash Point, (min) ASTM D 92, °C	185	185	185	185
Biodegradability, CO2 Evolution, OECD 301 B, %	> 60	> 60	> 60	> 60
Acute Algal Toxicity 72h EC50, OECD 201, mg/l	> 100	> 100	> 100	> 100
Acute Daphnia Toxicity 48h EC50, OECD 202, mg/l	> 100	> 100	> 100	> 100
Acute Fish Toxicity 96h LC50, OECD 203, mg/l	> 100	> 100	> 100	> 100

*Compared to Mobil DTE™ 20 Series hydraulic oils.

†When compared with conventional mineral lubricants.

‡Meets for ISO grades 32, 46 and 68.