

# Mobil SHC™ Aware™ Gear Series

Environmentally Acceptable Lubricants\* for use in gears and bearings



Energy lives here™

## Product features

Mobil SHC™ Aware™ Gear Series oils are a line of Environmentally Acceptable Lubricants (EAL)\* that meet US EPA VGP environmental requirements. They can offer:

- Outstanding load-carrying and antiwear properties, enabling all-around protection
- Excellent protection from micropitting and scuffing
- Good demulsibility and resistance to rust and corrosion
- Protection at a wide operating temperature range and excellent low-temperature startup
- Improved system cleanliness and deposit control

Mobil SHC Aware Gear oils have approvals from: Rolls-Royce, Wärtsilä, Blohm & Voss, Kemel Seals, Nakashima, Hyundai Heavy Industries and KTE.

## Potential benefits

Mobil SHC Aware Gear oils help:†

- 1 Maximise time between dry docks and reduce maintenance and operating costs
- 2 Optimise gear and bearing life to help increase equipment reliability
- 3 Lower potential remediation and cleanup costs in case of spills or leakage
- 4 Reduce need to flush system at time of switchover

## Mobil SHC Aware Gear product family meets US EPA VGP environmental requirements

Mobil SHC™ Aware™ Gear 68, 100 and 150 were developed to meet the United States Environmental Protection Agency's (EPA) 2013 Vessel General Permit (VGP) requirements.

Recommended applications	
Marine controllable pitch propeller and thruster applications and other below-water-line applications	✓
Enclosed gear drives including steel-on-steel spur, helical and bevel designs	✓
Systems where readily biodegradable and minimally toxic fluids may be required	✓
Marine and mobile equipment operating in environmentally sensitive areas	✓

\*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.

†When compared with conventional mineral lubricants.

# Mobil SHC™ Aware™ Gear Series

## All-around protection

Mobil SHC™ Aware™ Gear lubricants contain a proprietary additive system designed to provide outstanding protection against scuffing and micropitting. The lubricants, which have excellent shear stability, also offer exceptional rust and corrosion protection relative to mineral gear oils, even in the presence of seawater.

Formulated to last —  
dry dock to dry dock.



## Typical properties

Mobil SHC Aware Gear Series			
ISO Viscosity Grade	68	100	150
Viscosity, ASTM D 445			
cSt @ 40°C	68	100	150
cSt @ 100°C	10.7	13.3	17.8
Viscosity Index, ASTM D 2270	141	137	135
FZG Scuffing Test, A/8.3/90, DIN ISO 14635-1	14	14	14
FZG Micropitting by FVA Ni 54 U-1IV	10	10	10
FE8 Cage Test, DIN 51517-3:2014-02	34	34	34
Rust Characteristics, procedure B, ASTM D 665	Pass	Pass	Pass
Pour Point, ASTM D 97, °C	-36	-36	-30
Flash Point (min), ASTM D 92, °C	273	287	281
Air Release @ 50°C, ASTM D3427	12	21	31
% Viscosity Increase, B-10 Oxidation 80h @ 127°C	3	4	4
Biodegradability, CO2 Evolution, OECD 301 B, %	84	84	84
Acute Algal Toxicity 72h EC50, OECD 201, mg/l	>1000	>1000	>1000
Acute Daphnia Toxicity 48h EC50, OECD 202, mg/l	>1000	>1000	>1000
Acute Fish Toxicity 96h LC50, OECD 203, mg/l	>1000	>1000	>1000
Bioaccumulation, OECD 117, Partition Coefficient, log KOW	<3	<3	<3