

# Opt-Max Shieldguard 3008, 4008

## MARINE SYSTEM OIL

### System Lubricant for Low-speed Crosshead Diesel Engines



Opt-Max Shieldguard 3008, 4008 are formulated with carefully selected base oils and proven additives which meet the operational challenges of modern 2-Stroke engines that are operating with high and low loads.

### Product Description

Opt-Max Shieldguard 3008, 4008 are premium quality system lubricants designed for crankcase of low speed crosshead diesel engines. This product is formulated with good alkalinity and enhanced load carrying ability.

### Features and Benefits

- Enhanced detergency which effectively reduces and cleans potential deposits formation in the crankcase and piston cooling areas.
- Excellent thermal and oxidation stability that are critical for:
  - cooling of piston.
  - viscometric control and friction losses.
- Excellent load carrying capacity that provides effective lubrication and reduces wear in heavily loaded bearings, cam-follower contacts and gear train.
- Good anti-rust and corrosion protection properties that protect metal surfaces from corrosive wear.

### Applications

- Opt-Max Shieldguard 3008, 4008 are recommended for use in marine low-speed crosshead diesel engines and piston cooling.
- Opt-Max Shieldguard 3008, 4008 have meet the requirements of many major engine manufacturers, including MAN B&W and Wärtsilä.

## Specifications

Product Properties		Opt-Max Shieldguard 3008	Opt-Max Shieldguard 4008	Testing Methods
SAE Grade	-	30	40	-
Kinematic Viscosity (100°C)	mm <sup>2</sup> /s	11.0	14.5	ASTM D445
Density at 15°C	Kg/m <sup>3</sup>	886.1	888.1	ASTM D4052
Density at 20°C	Kg/m <sup>3</sup>	883.0	885.0	ASTM D4052
TBN	mgKO H/g	8	8	ASTM D2896
Viscosity Index	-	90	90	ASTM D2270
Flash Point	°C	240	240	ASTM D92
Pour Point	°C	-12	-12	ASTM D97
Sulphated Ash	%	1	1	ASTM D874
Water Content	%	Trace	Trace	ASTM D95
Rust Test (Sea Water)	-	Pass	Pass	ASTM D665
FZG, Fail Load Stage	-	11	11	DIN 51354

\* Above product properties are indicative and subject to change without prior notice

## Storage and Handling

- All storage equipment, tanks, pipes, valves and etc. apparatus has to be cleaned thoroughly and inspected to be clean for use before transferring or transporting Opt-Max Shieldguard 3008, 4008.
- Opt-Max Shieldguard 3008, 4008 must be stored in dedicated storage tanks/equipment and it is recommended to be stored in an indoor controlled environment.
- Storage tanks/equipment must be waterproof, mist-proof and free from other mechanical particles.
- Opt-Max Shieldguard 3008, 4008 must be clearly labelled properly during the entire transportation process to prevent the risk of mixing with other petrol-chemical product.

## Health & Safety

Opt-Max Shieldguard 3008, 4008 are unlikely to present any significant health or safety hazard when properly used in the intended application. This product must always be handled with care, particularly avoiding skin contact. For further guidance on product health & safety refer to the appropriate Opt-Max Shieldguard 3008, 4008 Material Safety Data Sheet.