

# Opt-Max Shieldguard 50110

MARINE CYLINDER OIL

## Cylinder Lubricant for Low-speed Crosshead Diesel Engines



Opt-Max Shieldguard 50110 is 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 50110 is a premium quality, high alkaline cylinder oil suitable for use in low speed two-stroke marine diesel engines operating on heavy fuel oil especially when slow steaming. It is recommended for 2 stroke diesel engines experiencing severe cold corrosion. It is particularly suitable for the new generation of highly rated, low speed marine diesel engines operating under higher pressures and longer strokes that can be periodically slow steaming. It is specially designed to mitigate cold corrosion and optimize the cylinder oil feed rates while minimizing the wear rates.

### Features and Benefits

- Outstanding acid neutralising properties and cold corrosion prevention which increases the reliability and the time between overhauls of cylinder unit components.
- Exceptional detergency and dispersancy properties which help:
  - To reduce and clean potential deposits on piston crown, top liner or in piston ring grooves.
  - To prevent ring sticking.
- Optimized lubrication film built up properties that help maintain an oil film under severe, high load conditions, thereby reducing abrasive wear and adhesive wear and catastrophic scuffing of the ring liner contact.
- Enhanced anti-wear properties that help protect against excessive cylinder liner and piston ring wear, thus allowing prolonged service intervals.

### Applications

- Opt-Max Shieldguard 50110 is recommended for operating conditions and engine types which are sensitive to cold corrosion and where use of a high alkalinity lubricant is recommended.
- It is not recommended to mix Opt-Max Shieldguard 50110 with all other cylinder oil due to the high additive content of Opt-Max Shieldguard 50110.
- During low feed rate operations, it is crucial that the actual cylinder and piston rings conditions are inspected on a regular basis. Please refer to the latest OEM's recommended cylinder oil feed rate.
- Opt-Max Shieldguard 50110 meets the requirements of many major engine manufacturers, including MAN B&W and Wärtsilä.

## Specifications

| Product Properties          |                    | Opt-Max<br>Shieldguard 50110 | Testing<br>Methods |
|-----------------------------|--------------------|------------------------------|--------------------|
| SAE Grade                   | -                  | 50                           | -                  |
| Kinematic Viscosity (100°C) | mm <sup>2</sup> /s | 21.5                         | ASTM D445          |
| Density at 15°C             | Kg/m <sup>3</sup>  | Report                       | ASTM D4052         |
| Density at 20°C             | Kg/m <sup>3</sup>  | -                            | ASTM D4052         |
| TBN                         | mgKOH/g            | 110                          | ASTM D2896         |
| Viscosity Index             | -                  | Report                       | ASTM D2270         |
| Flash Point                 | °C                 | Report                       | ASTM D92           |
| Pour Point                  | °C                 | Report                       | ASTM D97           |

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

## Storage and Handling

- All storage equipment, tanks, pipes, valves and etc. apparatus have to be cleaned thoroughly and inspected to be clean for use before transferring or transporting Opt-Max Shieldguard 50110.
- Opt-Max Shieldguard 50110 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 50110 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 50110 is unlikely to present any significant health or safety hazard when properly used in the recommended 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 50110 Material Safety Data Sheet.