

# **Opt-Max Shieldguard 5070**

## MARYNE CYLINDER OIL

### Cylinder Lubricant for Low-Speed Crosshead Diesel Engines

Opt-Max Shieldguard 5070 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 5070 is a premium quality cylinder lubricant designed for use in all low speed crosshead diesel engines which burn residual fuel oil with sulphur content up to 3.5% m/m (please refer to the latest OEM guidelines for sulphur content). It is particularly suitable for the new generation of highly rated, fuel efficient, low speed marine diesel engines operating under higher pressures, temperatures and longer strokes that can be periodically slow steaming.

## **Features and Benefits**

- Excellent acid neutralising properties and cold corrosion protection which help to prolong the service life of components.
- Excellent detergency and dispersancy properties which help:
  - Reduce and clean potential deposits between cylinder liner and piston
    Prevents ring sticking
- Excellent lubrication properties that help maintain an oil film under severe, high load conditions, thereby reducing frictional wear and preventing scuffing of liners, pistons and rings.
- Excellent anti-wear properties that help protect against excessive cylinder liner and piston ring wear, thus allowing prolonged service intervals.

## **Applications**

- Opt-Max Opt-Max Shieldguard 5070 is recommended for lubricating the cylinders of all large slowspeed marine diesel engines with fuel sulphur content less than 3.5% m/m.
- 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 5070 is approved by WINGD and meets requirements of many major engine manufacturers, including MAN B&W.

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## **Specifications**

Product Properties		Opt-Max Shieldguard 5070	Testing Methods
SAE Grade	-	50	-
Kinematic Viscosity (100°C)	mm2/s	19.5	ASTM D445
Density at 15°C	kg/m3	933.1	ASTM D4052
Density at 20°C	kg/m3	930.0	ASTM D4052
TBN	mgKOH/g	70	ASTM D2896
Viscosity Index	-	98	ASTM D2270
Flash Point	°C	250	ASTM D92
Pour Point	°C	-9	ASTM D97

\* Above product 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 5070.
- Opt-Max Shieldguard 5070 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 5070 must be labelled clearly and properly during the entire transportation process to prevent the risk of mixing with other petrochemical product.

## **Health and Safety**

Opt-Max Shieldguard 5070 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 5070 Material Safety Data Sheet.

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