

Opt-Max Shieldguard 4020

MARINE TRUNK PISTON ENGINE OIL

Lubricant for Marine Trunk Piston Engines

Opt-Max Shieldguard 4020 is formulated by carefully selected base oils and proven additives which meet the operational challenges of Marine Trunk Piston Engines.

Product Description

Opt-Max Shieldguard 4020 is premium quality marine trunk piston lubricant designed for use in medium speed marine trunk piston and auxiliary engines operating on heavy residual fuel oil. It has several outstanding properties which include, high residual fuel compatibility, thermal and oxidation stability, low volatility, high load carrying properties and corrosion protection which helps to prolong the life span of the engine.

Features and Benefits

- Good detergency and dispersancy properties that maintain engine cleanliness and minimises deposits formation in cylinder piston and liner.
- Enhanced anti-wear properties that reduce cylinder piston and liner abrasion under severe operating environment.
- Excellent anti-rust and corrosion protection that help to reduce damage and corrosion to the cylinder and piston during the combustion of high sulphur content fuel oil.
- Outstanding thermal, oxidation and alkalinity stability that help to protect engine components from thermal stresses and reduce under-crown deposits while promoting extended lubricant life.
- Excellent water resistance and separation capability for easy removal of water contaminating the oil via centrifuge.

Applications

- Opt-Max Shieldguard 4020 is recommended for use in medium speed main propulsion and auxiliary marine trunk piston engine operating on high load environment that burns heavy fuel oil with sulphur content less than 3.0% m/m.
- Opt-Max Shieldguard 4020 lubricating performance meets the standards of similar international lubricant brands.
- Opt-Max Shieldguard 4020 have meet the requirements of many major engine manufacturers, including MAN B&W and Wärtsilä.

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Specifications

Product Properties		Opt-Max Shieldguard 4020	Testing Methods
SAE Grade	-	40	-
Kinematic Viscosity (100° C)	mm ² /s	14.5	ASTM D445
Density at 15°C	Kg/m ³	903.1	ASTM D4052
Density at 20°C	Kg/m ³	900.1	ASTM D4052
TBN	mgKOH/g	20	ASTM D2896
Viscosity Index	-	90	ASTM D2270
Flash Point	°C	238	ASTM D93
Pour Point	°C	-9	ASTM D97
FZG Fail Load Stage	-	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 to prevent contamination with Opt-Max Shieldguard 4020.
- Opt-Max Shieldguard 4020 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 4020 must be clearly labelled properly during the entire transportation process to prevent the risk of mixing with other petrochemical product.

Health and Safety

Opt-Max Shieldguard 4020 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 4020 Material Safety Data Sheet.

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