

AXCL ULTRAMARINE MSDO Oil

Description

AXCL ULTRAMARINE MSDO Oil is a premium line of engine oils designed for exceptional performance and protection in various marine medium-speed diesel engines operating on high-sulfur residual fuels. Its advanced formulation, featuring the latest complex dispersant and detergent technology, delivers extended oil life, improved engine cleanliness, and efficient operation.

Key Features:

- **Long Lubrication Life:** Reduces maintenance costs and downtime with extended drain intervals.
- **Enhanced Engine Performance:** Promotes cleaner engines through superior deposit control, leading to improved efficiency and reduced wear.
- **Wide Applicability:**
 - **Fuel Compatibility:** Handles high-sulfur residual fuels effectively.
 - **Engine Compatibility:** Works seamlessly with HFO and HFO/LNG dual fuel engines.
 - **Gearbox Compatibility:** Suitable for gear lubrication applications with similar viscosity requirements.
 - **Engine Type Compatibility:** Compatible with leading manufacturers like MAN (B&W), KHD DEUTZ, PIELSTICK, NIGATA, MAK, DAIHATSU, and MIRRLESS BLACKSTONE (4-stroke).

Performance Standards and Approvals:

- API CF and CCMC D2 standards
- Caterpillar CMOT pass, Wärtsilä, Yanmar, and Daihatsu

Applications:

- **Marine Medium-Speed Diesel Engines:** Ideal for various applications, including:
 - Engines burning high-sulfur residual fuels.
 - HFO and HFO/LNG dual fuel engines.
 - High-output turbocharged engines.
 - Gear lubrication applications requiring similar viscosities.

Benefits & Advantages:

- **Superior Oxidation Resistance:** Maintains optimal lubrication properties longer, minimizing oil thickening.
- **Effective Acid Neutralization:** Protects against corrosion and wear by neutralizing acidic combustion byproducts.
- **Excellent Centrifugal Separator Operation:** Ensures efficient oil purification for optimal performance.

Specification & Parameter

#	Test	Method	Result					
1.	Product Grade	-	320	330	340	420	430	440
2.	Viscosity Grade	SAE	30	30	30	40	40	40
3.	Appearance	Visual	Bright & Clear	Bright & Clear	Bright & Clear	Bright & Clear	Bright & Clear	Bright & Clear
4.	Kin. Viscosity @ 40 °C, cSt	ASTM D 445	102.0	105.0	105.50	140.0	142.0	144.0
5.	Kin. Viscosity @ 100 °C, cSt	ASTM D 445	11.50	11.70	11.80	14.20	14.50	14.60
6.	Viscosity Index	ASTM D 2270	99	99	100	99	100	100
7.	Density @ 15 °C	ASTM D 1298	0.892	0.894	0.898	0.893	0.895	0.898
8.	TBN, mg KOH/g	ASTM D 2896	20	30	40	20	30	40
9.	Flash Point, °C	ASTM D 92	≥ 230	≥ 230	≥ 230	≥ 240	≥ 240	≥ 240
10.	Pour Point, °C	ASTM D 97	≤ -18	≤ -18	≤ -18	≤ -18	≤ -18	≤ -18
11.	Foam Seq. I, II, III	ASTM D 892	0/0	0/0	0/0	0/0	0/0	0/0
12.	Water Content	Crackles	Nil	Nil	Nil	Nil	Nil	Nil
13.	Sulphated Ash, wt. %	ASTM D 874	2.45	3.66	4.88	2.45	3.66	4.98

**Technical data provided here is for reference only. Minor variations in product typical test data are to be expected.*

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