

MX Series

HIGH PERFORMANCE
MARINE TRUNK PISTON
ENGINE OILS (TPEO)

MaxPro1 MX (TPEO) oils are a series of premium quality multifunctional crankcase marine lubricants designed for use in highly rated, medium-speed diesel engines. The lower TBN grades (**MX 3012** and **MX 4012**) maintain a fine balance of detergent and dispersant properties, and sometimes may also be used in high-speed diesel engines.

All **MX** grades are blended with high quality base oils and proven additives that protect the oils from oxidation, and through an advanced detergency technology, provides excellent cleanliness to the engines. In addition, the oils demonstrate superior load-carrying abilities and high alkalinity retention properties that prevent corrosive wear over long periods of time. They also have excellent asphaltene handling and water shedding properties that are especially critical for engines using HFO (heavy fuel oils).

MaxPro1 MX (TPEO) formulations are based on a proven additive technology that has been established with a range of engine builder approvals including MAN B+W, Sulzer and GMT.



APPLICATIONS

- May be used in the general lubrication of shipboard equipment where specialist lubricants are not required, including certain enclosed gears, shaft bearings, etc.
- **MaxPro1 MX 3012** and **MX 4012** are generally recommended for use on 4-stroke engines running on distillate fuel with sulphur content of up to 1.5%
- **MaxPro1 MX 3030, MX 3040, MX 4030** and **MX 4040** are used in the main propulsion and auxiliary engines of deep-sea vessels, coastal and river ships, and stationary power plants that are running on residual fuels of up to 3.5% sulphur



FEATURES AND BENEFITS

- Superior thermal and oxidation stability, enable performance even under severe operating conditions
- Effective detergent and dispersant additive system, keeps engine clean
- Good volatility control, reduces oil consumption
- High alkaline reserve to protect against corrosion due to oxides of sulfur

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- Good water separation characteristics
- Outstanding foaming control
- Excellent wear and rust protection

TYPICAL PHYSICAL CHARACTERISTICS

SAE grade	Test Method	MX 3012	MX 4012	MX 3030	MX 4030	MX 3040	MX 4040
Product Code		5050	5051	5059	5060	5063	5064
Density @ 15°C	ASTM D4052	0.89	0.891	0.89	0.896	0.895	0.898
Appearance	Visual	Amber	Amber	Amber	Amber	Amber	Amber
Viscosity at 100°C, cSt	ASTM D445	11.6	14.5	11.8	14.6	12	14.8
Viscosity at 40°C, cSt	ASTM D445	104.8	147	106.9	148.9	110.7	151.8
Viscosity Index	ASTM D2270	98	97	98	96	97	96
TBN, mgm KOH/gm	ASTM D2896	12	12	30	30	40	40
Sulphated Ash, % wt	ASTM D874	1.67	1.67	4.04	4.04	5.3	5.3
Pour Point, °C	ASTM D97	-18	-15	-15	-15	-15	-15
Flash Point, °C	ASTM D92	230	232	238	240	244	248

The information provided is to our best knowledge, true & accurate, subjected to change without notification due to continual product research and development.

Available Size & Part Number

	200L	1,000L
MX 3012	5050-200	5050-1000
MX 4012	5051-200	5051-1000
MX 3030	5059-200	5059-1000
MX 4030	5060-200	5060-1000
MX 3040	5063-200	5063-1000
MX 4040	5064-200	5064-1000

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