

MARINÖL Marine 2-Cycle Outboard Oil

Product Description

MARINÖL MARINE 2-CYCLE OUTBOARD OIL is a high-performance, ashless synthetic blend 2-stroke engine oil formulated to meet the NMMA TC-W3 specification. It is designed for use in water-cooled 2-cycle gasoline outboard engines and provides outstanding cleanliness, wear protection, and corrosion resistance under harsh marine operating conditions. It minimizes carbon deposits on pistons and spark plugs and ensures clean, smoke-reduced operation.

Product Features & Benefits

- **Ashless Additive System:** Prevents ring sticking, pre-ignition, and piston scuffing
- **Outstanding Lubricity:** Reduces wear under severe load and high RPM
- **Superior Detergency:** Maintains piston and combustion chamber cleanliness
- **Corrosion Protection:** Resists saltwater-induced rust and bearing pitting
- **Low Smoke & Odor:** Cleaner operation for marine environments
- **Excellent Miscibility:** Mixes instantly with gasoline in premix and injection systems

Application

- Recommended for 2-stroke outboard motors requiring NMMA TC-W3 oils
- Suitable for use in outboard engines, jet skis, personal watercraft (PWC), and small 2-stroke marine engines
- For use in oil-injection and premix systems (follow engine manufacturer's ratio, typically 1:50)
- Compatible with engines from Yamaha, Mercury, Evinrude, Suzuki, Johnson, Tohatsu, and others

PERFORMANCE STANDARDS

- Meets or exceeds API TC-W3
- Approved and registered with NMMA TC-W3 licensing system
- Backward compatible with TC-W and TC-WII specifications

Recommended For

- Outboard engines operating in high-RPM marine environments
- Applications requiring low smoke, ashless, and water-cooled engine protection

Typical Properties by Viscosity Grade

Property	Method	Typical Result
Appearance	Visual	Blue / Green dyed fluid
Density @ 15°C	ASTM D4052	0.870 g/cm ³
Kinematic Viscosity @ 40°C	ASTM D445	52 mm ² /s
Kinematic Viscosity @ 100°C	ASTM D445	8.5 mm ² /s
Viscosity Index	ASTM D2270	135
Flash Point (COC)	ASTM D92	105 °C
Pour Point	ASTM D97	-33 °C
TBN	ASTM D2896	Not applicable (ashless formulation)
Ash Content	ASTM D874	<0.01 % wt
Color	Visual	Dyed (Blue/Green)

Mixing Ratio

Use as per manufacturer's instructions. Typical mix ratio: 1:50 (2%) unless otherwise specified.



STORAGE & HANDLING

- Store in a cool, dry place away from direct sunlight
- Keep containers tightly sealed
- Avoid contamination with water or other lubricants

Health, Safety, and Environment

- Refer to SDS (Safety Data Sheet) before use
- Avoid contact with eyes or prolonged skin exposure
- Do not dispose of used oil in water bodies or drains - recycle through authorized facilities

