

## EMPROTEC BIOMARINE ES 2-STROKE

**Product Code:** MAR011 | **Revision:** 20240821



Ester based fully synthetic biodegradable two stroke oil for marine applications.

### Available Pack Sizes



### Applications

A high performance and biodegradable two stroke engine oil specifically designed to meet the demands of the U.S.A. National Marine Manufacturers Association NMMA TC-W3. Developed for water cooled outboard two stroke spark ignition.

### Recommended by Aztec Oils as suitable for the following applications

NMMA TC-W3  
Mercury Marine, Yamaha, Suzuki, Force/US Marine, Sears and other manufacturers requiring NMMA TC-W3 oil. Can be used in other water-cooled two stroke engines such as snowmobiles.

### Benefits

- Ashless formulation specifically for water cooled engines to give a long operating life, withstand high loads, constant throttle and avoid pre-ignition.
- Developed for both oil injection and pre-mix systems up to 50:1.
- Power protection formula gives superior protection against piston seizure, even at high temperatures when tested with very low oiling rates.
- Reduced deposits in piston cooling spaces and crankcase.
- Superb detergency and dispersancy system.

### Typical Test Data

Density @ 15°C (kg/m <sup>3</sup> )	ASTM D4052	0.92
Flash Point (°C)	ASTM D92	>80
Kinematic Viscosity @ 40°C (mm <sup>2</sup> /s)	ASTM D445	51.6
Kinematic Viscosity @ 100°C (mm <sup>2</sup> /s)	ASTM D445	8.7
Pour Point (°C)	ASTM D97	<-25
Total Base Number (mg KOH/g)	ASTM D2896	8.0
Viscosity Index	ASTM D2207	147

The typical test data provided is taken from average values, there will be some variability in production and therefore do not constitute a specification.

### Health, Safety & Recommendations

In line with our policy of continued improvement, Aztec Oils reserve the right to change specifications and availability without prior notice. This product, used according to our recommendations and for its designed application, does not represent any particular risk. The information present in this technical data sheet is indicative of the product and is given in good faith, but should not form part of any specification.

## Health, Safety & Recommendations

- A Safety Data Sheet is available for consultation at [www.aztecoils.co.uk](http://www.aztecoils.co.uk).
- Before using this product, the maintenance guide should be checked and oil changes must be carried out in accordance with the manufacturers' recommendations.
- Packaging should not be left exposed to elements and drums should be laid horizontally to prevent contamination.
- This product should not be stored at temperatures over 60°C, kept out of direct sunlight, protected from frost and fluctuations in temperature.
- When disposing of the product after use, please protect the environment and comply with local regulations.

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