# PRODUCT DATA SHEET

## GulfSea Outboard 3

*High Performance 2-Cycle Outboard Engine Oil*

## Product Description

**GulfSea Outboard 3** is high performance, ashless, 2-cycle engine oil developed to meet the most critical requirements of modern water cooled outboard engines. It is designed for the harsh operating conditions of marine environment and exceeds the stringent performance requirements of the latest National Marine Manufacturers Association's specification NMMA TC–W3®. The advanced ashless additive technology used in this oil provides excellent lubricity and protection against wear & rust.

## Features & Benefits

- The latest additive technology helps in protecting the piston from scuffing, ensuring cleaner engines and minimizing combustion chamber deposits with negligible port clogging.
- The special ashless detergents protect against piston ring sticking, spark plug fouling and pre-ignition.
- Special rust inhibitors guard against the formation of rust & corrosion even in marine salt water environment.
- Ensures easy mixing and forms stable mixtures with gasoline even at low ambient temperatures.

## Applications

- Recommended for and meets the warranty requirements of the latest high output 2- Cycle water cooled outboard engines requiring NMMA TC-W3® quality oils.
- Also recommended for 2-Cycle, water cooled outboard engines where NMMA TCW2®, NMMA TC-W® or other general purpose lubricants are required.
- It is suitable for adding as a premix with gasoline or injecting through variable ratio oil injection systems.

## Typical Properties

| GulfSea Outboard 3 | | |
|---|---|---|
| **Meets the following Specifications** | | |
| **NMMA TC-W3®** | | |
| **Typical Properties** | | |
| **Test Parameters** | **ASTM Method** | **Typical Values** |
| Viscosity @ 100 $^0$C, cSt | D 445 | 7.5 |
| Viscosity Index | D 2270 | 130 |
| Flash Point, $^0$C | D 92 | 96 |
| Pour Point, $^0$C | D 97 | -33 |
| BN, mg KOH/g | D 2896 | 3.4 |
| Density @ 15 $^0$C, Kg/l | D 1298 | 0.867 |

July 2014