

# PRODUCT INFORMATION



## Powers-All Marine NS Hydraulic Oil

**DESCRIPTION:** Powers-All Marine NS Hydraulic Oil is premium quality, anti-wear hydraulic oil designed for use in various mobile and stationary hydraulic equipment, compressors and lifts that operate in environmentally sensitive areas where leaks or spills of hydraulic fluid could result in contamination of the soil or nearby waterways. The zinc free formulation is considered to be non toxic to aquatic life and has been formulated to comply with the U.S. EPA LC-50 testing criteria adopted by the U.S Fish and Wildlife Service for mysidopsis-bahia shrimp, rainbow trout and fathead minnows. The unique aromatic-free chemistry incorporated in this environmentally friendly hydraulic oil is ideally suited for applications that require strict compliance with U.S Coast Guard static sheen test requirements.

- QUALITIES:**
- **High Performance** – excellent wear protection for critical system components
  - **Environmentally Friendly / Non-Toxic** – formulated to pass acute aquatic toxicity testing
  - **Inherently Biodegradable** - when compared to conventional AW hydraulic oil
  - **Longer Service Life** – when compared to conventional zinc containing hydraulic oil or vegetable base oil

**APPLICATIONS:** Powers-All Marine NS Hydraulic Oil is recommended for use in equipment manufactured by Eaton (Vickers), Denison, Sauer-Danfoss, Bosch-Rexroth, Racine, Oilgear and others. **Powers-All Marine NS 32, 46, 68** are suitable for use when DIN 51524 Part 2 HLP, ISO 11158, ASTM D6158 and SAE MS 1004 oil specifications are recommended.

### Typical Properties:

Powers-All Marine NS Hydraulic Oils

ISO Viscosity		32	46	68
Product Code	Test Method	PA334932	PA334946	PA334968
Specific Gravity, 15.6 °C		0.85	0.86	0.87
Density, lb.gal		7.05	7.14	7.22
Viscosity cSt @ 40°C	ASTM D445	32	46	68
Viscosity cSt @ 100°C	ASTM D445	5.5	6.8	8.8
Viscosity Index	ASTM D2270	105	102	100
Color	ASTM D1500	L1.0	L1.0	L1.0
Flash Point, COC, °F (°C)	ASTM D92	420 (215)	425 (218)	430 (221)
Oxidation Life, hrs. to 2.0 Acid No. (est.)	ASTM D943	6,000+	6,000+	6,000+
Pour Point °F (°C)	ASTM D97	-20 (-28)	-20 (-28)	-20 (28)
Four Ball Wear, 40Kg	ASTM D4172	0.48	0.48	0.48

*\*Note: Values shown are typical only and do not constitute a specification. Minor variations in product are to be expected in normal manufacturing. Always confirm with the original manufacturer's recommendation for proper equipment operating requirements.*

11/18



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