

### SYNTHETIC WATER SOLUBLE, BIODEGRADABLE, FIRE RESISTANT HYDRAULIC FLUID

#### DESCRIPTION:

**NEPTUNE AW Hydraulic Fluids** are high performance hydraulic fluids designed for demanding industrial applications requiring environmental sensitivity, water solubility, fire resistance, and excellent anti-wear properties over wide temperature ranges. These polyalkylene glycol (PAG) based fluids, which are available in three viscosity grades, are anhydrous (water-free). Neptune AW Hydraulic Fluids do not break down to form sludge, and they do not hydrolyze in the presence of water. Furthermore, because of their high viscosity indices and excellent low temperature characteristics, one Neptune AW viscosity grade fluid may replace two or three viscosity grade mineral oils to provide high performance across all seasons. These hydraulic fluids are ideal for use in applications such as dockside/marine, forestry, amusement, and industrial operations.

#### ADVANTAGES:

**Excellent Anti-Wear Performance** – Neptune AW Hydraulic Fluids have demonstrated exceptional load-carrying capabilities and are specially formulated (with no zinc or other metal additives) to provide effective corrosion protection and anti-wear performance in hydraulic systems. They are rated as anti-wear (AW) fluids according to ASTM D7043 testing and FZG testing, which means the potential for greater operating reliability, less downtime, and lower maintenance costs.

**Clean, Long-Lasting Operation** – When proper fluid and equipment maintenance procedures are followed, Neptune AW Hydraulic Fluids offer a long service life and operating reliability, lower maintenance costs, and reduced overall downtime. Because Neptune AW Fluids are water-soluble, shop and equipment cleanup is easier than the cleanup of conventional oil fluids.

**Fire Resistance** – High flash and fire points provide safety in applications calling for fire resistant fluids, thus providing operating confidence and potentially reduced insurance costs. FM Approvals, using FM test method 6930, has classified Neptune AW 46 and 68 AW Hydraulic Fluids as “Approved Industrial Fluids”.

**All Season Performance** – Neptune AW Hydraulic Fluids have high viscosity indices and low pour points, allowing year-round usage and eliminating seasonal changeovers. One UCON TRIDENT Fluid can replace two or three viscosity grade oils, thereby reducing seasonal fluid purchase and disposal costs, lowering maintenance costs, and requiring less downtime.

**Biodegradability** – Neptune AW 32, 46 and 68 AW Hydraulic Fluids are all readily biodegradable according to OECD 301F.

**Aquatic Toxicity** – Neptune AW Hydraulic Fluids are “Practically Non-Toxic” to fish and other aquatic wildlife according to the U.S. Fish and Wildlife Service hazard classification.

# Neptune<sup>®</sup> AW Series

## PROPERTIES:

	Test Method	N AW-10	N AW-15	N AW-22	N AW-32	N AW-46	N AW-68
Viscosity @ 40°C	ASTM D445	8.77 cSt	13.97 cSt	20.45 cSt	32.93 cSt	46.96 cSt	67.97 cSt
Viscosity @ 100°C	ASTM D445	2.36 cSt	3.60 cSt	4.98 cSt	7.13 cSt	9.88 cSt	13.91 cSt
Viscosity Index	ASTM D2270	86	147	183	188	203	214
Pour Point	ASTM D97	-62 °C (-80 °F)	-56 °C (-70 °F)	-51 °C (-60 °F)	-46 °C (-51 °F)	-40 °C (-40 °F)	-35 °C (-31 °F)
Air Release @ 50°C	ASTM D3427	1.5 min			5.0 min	7.5 min	7.0 min
Specific Gravity @ 25°C	ASTM D1298	0.99 g/cm <sup>3</sup>	1.00 g/cm <sup>3</sup>	1.01 g/cm <sup>3</sup>	1.02 g/cm <sup>3</sup>	1.03 g/cm <sup>3</sup>	1.03 g/cm <sup>3</sup>
Density @77 °F	ASTM D1298	8.20 lbs/gal	8.30 lbs/gal	8.41 lbs/gal	8.48 lbs/gal	8.51 lbs/gal	8.56 lbs/gal
Flash Point	ASTM D92	123 °C (253 °F)	139 °C (282 °F)	145 °C (293 °F)	251 °C (483 °F)	255 °C (491 °F)	253 °C (487 °F)
Fire Point	ASTM D92	137 °C (279 °F)	161 °C (322 °F)	163 °C (325 °F)	275 °C (527 °F)	285 °C (545 °F)	285 °C (545 °F)
Cleanliness	ISO 4406:1999	18/17/14	18/17/14	18/17/14	18/17/14	18/17/14	18/17/14
Total Acid Number	ASTM D664	1.0 mgKOH/g	1.0 mgKOH/g	1.0 mgKOH/g	1.0 mgKOH/g	1.0 mgKOH/g	1.0 mgKOH/g
Rust Prevention	ASTM D665A	Pass	Pass	Pass	Pass	Pass	Pass
Copper Strip Corrosion	ASTM D130	1B	1B	1B	1B	1B	1B
Foam Tendency/Stability	ASTM D892						
Sequence I		0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Sequence II		0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Sequence III		0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
EP Properties	ASTM D2783						
Non-seizure Load					80 kg	100 kg	100 kg
Load-Wear Index					36.4	43.4	43.0
Weld Load					200 kg	200 kg	200 kg
Four-Ball Wear	ASTM D4172	0.4 mm			0.39 mm	0.38 mm	0.20 mm
Hydraulic Pump Wear	ASTM D7043				2.2 mg		
Eaton Pump Test	35VQ25A				Pass		
Parker Pump Test	T6H20C					Pass	
FZG Gear Test	ASTM D5182						
Pass Load Stage					10	11	
Fail Load Stage					11	12	

The information contained herein is correct to the best of our knowledge. The recommendations or suggestions contained in this bulletin are made without guarantee or representation as to results. We suggest that you evaluate these recommendations and suggestions in your own laboratory prior to use. Our responsibility for claims arising from breach of warranty, negligence, or otherwise is limited to the purchase price of the material.



612 Chestnut Street, Nanaimo, BC, Canada V9S 2L2  
 Phone: 250-739-0960 Email: sales@coastlubricants.com Web: www.coastlubricants.com