COAST LUBRICANTS & INDUSTRIAL SUPPLY

SynBio™ Series
UCON TRIDENT

SYNTHETIC WATER SOLUBLE, BIODEGRADABLE, FIRE RESISTANT HYDRAULIC FLUID

DESCRIPTION:

UCON TRIDENT™ 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). UCON TRIDENT 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 UCON TRIDENT 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 – UCON TRIDENT™ 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, UCON TRIDENT™ AW Hydraulic Fluids offer a long service life and operating reliability, lower maintenance costs, and reduced overall downtime. Because UCON TRIDENT 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 UCON TRIDENT™ 46 AW and 68 AW Hydraulic Fluids as "Approved Industrial Fluids".

All Season Performance – UCON TRIDENT™ 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 – UCON TRIDENT™ 32, 46 and 68 AW Hydraulic Fluids are readily biodegradable according to OECD 301F.

Aquatic Toxicity – UCON TRIDENT™ AW Hydraulic Fluids are "Practically Non-Toxic" to fish and other aquatic wildlife according to the U.S. Fish and Wildlife Service hazard classification.

SPECIFICATIONS:

	UCON TRIDENT™ AW Hydraulic Fluid			
Performance Properties	**32**	**46**	**68**	**Test Method**
FZG Visual Gear Test, Stages Passed	12	12	12	ASTM D5182
Four Ball EP Test Load Wear Index Last Non-seizure, 80 kg (mm scar) Last Seizure, 126 kg (mm scar) Weld Load, kg	32.94 0.40 2.75 160	33.10 0.40 2.60 160	33.26 0.39 2.53 160	ASTM D2783
V104 Vane Pump Test (total mg wear)	<10	<10	<10	ASTM D7043
35 VQ Vickers Vane Pump Test[1] Individual Cartridge Wear, mg Average Wear, mg	Pass 8, 8, 8 8	— — —	— — —	M-2950-S
Sonic Shear Stability Initial Viscosity @ 40°C (cSt) Irradiated Viscosity @ 40°C (cSt)	36.8 36.9	47.1 47.0	68.9 69.2	ASTM D5621 ASTM D5621
Viscosity Properties				
Viscosity @ 40°C (cSt) Viscosity @ 100°C (cSt) Viscosity @ 0°C (cSt)	35.4 8.0 294	46.0 9.8 390	68.0 13.7 614	ASTM D445 ASTM D445 ASTM D445
Viscosity Index	194	200	209	ASTM D2270
Fire Properties				
Flash Point – Cleveland Open Cup, °C	271	312	288	ASTM D92
Flash Point – Pensky Martens Closed Cup, °C	218	223	None[2]	ASTM D93
Fire Point, °C	304	316	322	ASTM D92
FM Approvals[3]	—	Approved	Approved	Test Standard 6930
Physical-Chemical Properties				
Specific Gravity @ 20°C	1.031	1.035	1.041	ASTM D1298
Foam Test – Sequence I, Initial Volume/ml Sequence II, Initial Volume/ml Sequence III, Initial Volume/ml	10/0 10/0 10/0	10/0 10/0 10/0	10/0 10/0 10/0	ASTM D892
Vapor Pressure (mm Hg)	<0.01	<0.01	<0.01	ASTM E1719
Specific Heat (Cal/g/°C)	0.476	0.481	0.478	ASTM E1269
Pour Point, °C	-59	-51	-51	ASTM D97
Ash Content (%)	0.011	0.008	0.008	ASTM D482
Corrosion Protection (TORT)	Pass	Pass	Pass	ASTM D665A
Copper Strip Corrosion	1b, shiny	1a, shiny	1a, shiny	ISO 2160
Aging Behavior (Hrs) mg KOH/g Hours	1.14 1,008	0.92 1,008	0.31 1,008	DIN 51587
Coefficient of Expansion @ 20°C @ 55°C	0.00078 0.00080	0.00080 0.00078	0.00079 0.00078	ASTM D1903
Weight, lbs/gal. (20°C)	8.57	8.57	8.58	

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