

HIGH PERFORMANCE, READILY BIODEGRADABLE HYDRAULIC FLUID

Description:

EnviroLogic® 3022 hydraulic fluid is a high performance, readily biodegradable synthetic ISO 22 grade hydraulic fluid. It is intended for severe service, extreme high temperature (250°F / 121°C), low temperature (-40°F / -40°C), and high pressure (5000+psi) applications. It exhibits enhanced wear protection, cleanliness, and longer life than conventional petroleum hydraulic oils. EnviroLogic® 3022 can directly replace petroleum oil based hydraulic fluids of the same viscosity, yet has reduced environmental impact in the event of a leak or spill, as it is readily biodegradable and non-sheening.

EnviroLogic® 3022 series is self certified as an Environmentally Acceptable Lubricant (EAL) compliant with 2013 US EPA Vessel General Permit (VGP).

Meets the ISO classification Hydraulic Environmental Polyalphaolefin and related hydrocarbon products (HEPR) per ISO 6743-4.

Property	Method	Requirements	Result
Kinematic Viscosity			
At 40°C, cSt	D445	19.8-24.2	22
At 100°C, cSt	D445		5.5
Viscosity Index	D2270	90 min	206
Density(60°F), kg/m ³	D4052	report	877
Pour Point, °C	D97	-15 max	-45
Flash Point (COC), °C	D92	185 min	180
Acid Number, mgKOH/g	D664	Report	0.30
Steel Pin Corrosion (4 hours, 100°C)	D665	Pass	
Deionized Water			Pass
Synthetic Salt Water			Pass
Foam Properties (after 10 minutes)	D892		
Sequence I, mL	Stability/Tendency	150-0 max	0-0
Sequence II, mL	Stability/Tendency	75-0 max	5-0
Sequence III, mL	Stability/Tendency	150-0 max	0-0
Demulse Properties (54°C)	D1401		
Oil / Water / Emulsion		40/37/3	40 / 40 / 0
Minutes		30	10
Copper Corrosion	D130		
3hrs @ 100 °C		2 max	1a

Property	Method	Requirements	Result
Oxidation Mins to 25 psi loss	D2272		400-500
Vickers 35VQ25 Vane Pump*	35VQ25		Pass
Vickers V104C Vane Pump*			
Total loss of ring and vane, mg			Pass
Biodegradability, %	D7373	60% min	>60
Ecotoxicity			
Fathead minnow, 96h LC50, ppm	OECD 201	>100	>110
Daphnia magna, 48h EC50, ppm	OECD 202	>100	>120
Algae, 72h EC50, ppm	OECD 203	>100	>1,000
Elastomer SRE-NBR-1 (100°C 168 hours)	D471		
Hardness Shore A Change, pts		0 to -7	-7.6
Volume Change, %		0 to +12	11.7
Elastomer HNBR (100°C 168 hours)	D471		
Hardness Shore A Change, pts		0 to -7	-4
Volume Change, %		0 to +12	3.0
Elastomer FKM (100°C 168 hours)	DIN 1817		
Hardness Shore A Change, pts		0 to -7	-1
Volume Change, %		0 to +12	0.6
Compatibility with Select Hydraulic Fluids			
Biodegradable Competitor stored @ 100°F		Pass	Pass
Biodegradable Competitor stored @ -5°F		Pass	Pass
Petroleum Hydraulic Fluid stored @ 100°F		Pass	Pass
Petroleum Hydraulic Fluid stored @ -5°F		Pass	Pass

*based read across from EL 146

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