

GreensCare 32

Biodegradable Hydraulic Fluid

Manufactured exclusively for Jacobsen, A Textron Company, by

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Description

GreensCare 32 Hydraulic Fluid is a readily biodegradable and non-hazardous ISO 32 viscosity grade hydraulic oil for use in general purpose hydraulic systems. GreensCare 32 is based on unique biodegradable base oil technology and is a direct replacement for petroleum oil based hydraulic fluids. GreensCare 32 is formulated with performance additive chemistry to exceed the requirements of petroleum hydraulic fluids. It also meets the performance requirements for Type I, II, and III hydraulic tools.

Typical Properties

Flash Point, °F	ASTM D-92	>400
Specific Gravity, 60°F	ASTM D-1122	0.89
Degrees API		27.5
Viscosity @ 40°C, cst.	ASTM D-445	32
Viscosity @ 100°C, cst.	ASTM D-445	7.0
Viscosity Index	ASTM D-2270	205
Pour Point	ASTM D-97	-36°C
Brookfield Viscosity	ASTM D2983	
	- 20 C cP	705
	- 25 C cP	1073
	- 35 C cP	3110
Dielectric kV	ASTM 877	45
Color	Visual	Blue

Performance Properties

Foam, Sequence I, II, III	ASTM D-892	Pass
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Performance Properties (cont.)

Copper Corrosion, 3 hours @ 100°C	ASTM D-130	1a
Hydrolytic stability, Copper loss / appearance/ NNA	ASTM D-2619	0.06 / 1b / .11
Rust, ASTM D-665 A (Distilled Water)		Pass
Rust, ASTM D-665 B (Synthetic Sea Water)		Pass
Demulsibility ASTM D-1401 oil / water / emulsion (minutes)		40-40-0 (10)

Wear Performance

Four Ball Wear, ASTM D-4172 1 hr., 167°F, 1800 rpm, 40 kg., scar mm.		0.36
Timken Wear, ASTM D-2782 OK Load, lbs.		40 - 50(typical)
Hydraulic Pump Test, ASTM D-2282 mg. wt. loss, ring and vanes		3.4

Oxidative Stability

Oxidative Stability, ASTM D-2272 RBOT, 100C min. to 25-psi loss		80 - 100
Static Oxidation Test 168 hrs. @ 150°C condition of beaker		clean

Biodegradability

CEC-L-33-T-82		94%
Modified Sturm, OECD 301B		>60%

Ecotoxicity

Fathead minnow, 96h LC50, ppm		>10,000
Daphnia magna, 48h EC50, ppm		>10,000
Sludge respiration inhibition, EC50, ppm		>10,000
Algae EC50, ppm		100 – 1000

Seal Compatibility

Buna		Pass
Neoprene		Pass
Viton		Pass

Performance Properties (cont.)**Compatibility with Select Hydraulic Fluids (4 Weeks)**

Biodegradable Competitor "T" stored @ 100° F	Pass
Biodegradable Competitor "T" stored @ -5° F	Pass
Petroleum Hydraulic Fluid stored @ 100° F	Pass
Petroleum Hydraulic Fluid stored @ -5° F	Pass