

## RSC ENVIROLOGIC® HF 22 RED

### Readily Biodegradable\* Hydraulic Fluids

EnviroLogic® HF 22 RED hydraulic fluid is a readily biodegradable, biobased high dielectric ISO 22 viscosity grade hydraulic oil formulated with red colored dye for use in general purpose hydraulic systems for ROVs. It is based on unique base oil technology and is a direct replacement for petroleum based hydraulic fluids of the same viscosity. RSC EnviroLogic® HF 22 RED is formulated for high anti-wear performance, excellent water separation, low foaming and air release characteristics, excellent corrosion and rust protection, high oxidative stability for long fluid use, as well as a red color that allows ROVs to readily identify leaks in extreme under water environments. It also has a high viscosity index and will permit fluid operation over an extremely broad temperature range. It has reduced environmental impact in the event of a leak or spill, as it is readily biodegradable and non-sheening. It is an Environmentally Acceptable Lubricant (EAL) compliant with 2013 US EPA Vessel General Permit (VGP). EnviroLogic® HF RED meets the requirements for various manufacturers.

- 2013 EPA VGP Compliant
- Certified as an Environmentally Acceptable Lubricant (EAL)
- Non-sheening\*\*
- Readily biodegradable, biodegrades ≥ 60% within 28 days\*

Typical Properties		
RSC EnviroLogic® Product Number		HF 22 RED
ISO Viscosity Grade		22
Kinematic Viscosity, ASTM D445 cSt,	@ 100°C	5.5
	@ 40°C	22
Viscosity Index, ASTM D2270		206
Pour Point, ASTM D97, °C		-42
Flash Point, ASTM D92, °C		180
Specific Gravity, 60°F, ASTM D1298		0.88
Density, 15.6°C (60°F), lbs/gal		7.30
API Gravity, 15.6°C (60°F)		29.9

Performance Properties		
RSC EnviroLogic® Product Number		HF 22 RED
Foam Properties, ASTM D892	Sequence I, Tendency/Stability	50/0
	Sequence II, Tendency/Stability	50/0
	Sequence III, Tendency/Stability	50/0
Demulse Properties, ASTM D1401	Oil/Water/Emulsion	40/40/0
	Minutes	30

\*As per OECD 301B or ASTM D7373

\*\*CFR40 Part 435B

Performance Properties (cont.)		
RSC EnviroLogic® Product Number		HF 22 RED
Biodegradability, ASTM D7373, %		> 60
Aquatic Toxicity	Fathead Minnow LC50 ppm, 96 h	> 10,000
	Daphnia Magna, EC50 ppm, 48 h	> 100
	Algae EC50, ppm	> 100
BioPreferred <sup>1</sup> (≥ 44% biobased content)		Yes
Elastomer Compatibility	SRE-NBR (100°C, 168 hours)	Pass
	HNBR (100°C, 168 hours)	Pass
	FKM (150°C, 168 hours)	Pass

The product meets most MIL performance specifications for environmentally safe antiwear hydraulic fluids.

<sup>1</sup>USDA BioPreferred lubricant categories target > 44%.

<sup>2</sup>Dielectric Strength ASTM D877, 40KV.

## OEM Approvals

RSC EnviroLogic® HF 22 Red meets the requirements for various manufacturers.



For more information about RSC Bio Solutions, visit us at [rscbio.com](http://rscbio.com) or call +1 704.684.6100.