



## ENVIROLOGIC® HF HP SERIES

### High Performance, Readily Biodegradable\* Hydraulic Fluids

The ENVIROLOGIC® HF HP Series consists of readily biodegradable synthetic hydraulic fluids designed for extreme operating temperatures and pressures. Because they're formulated to provide exceptional oxidation and thermal properties, these products are ideal for mobile or marine hydraulic and propulsion systems operating in environmentally sensitive areas.

These hydraulic fluids can withstand temperatures as high as 250°F/121°C or as low as -40°F/-40°C, and they can handle pressure as great as 5000+ psi/34,470 kPa. In other words, they were created with demanding jobs in mind. Plus, when compared to conventional, petroleum based hydraulic oils, the ENVIROLOGIC® HF HP Series offers superior wear protection and longer changeover intervals.

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

Typical Properties		ENVIROLOGIC® HF HP Series					
ENVIROLOGIC® Product Number		HF 15 HP	HF 22 HP	HF 32 HP	HF 46 HP	HF 68 HP	HF 100 HP
ISO Viscosity Grade		15	22	32	46	68	100
Kinematic Viscosity, ASTM D445, cSt	@ 100°C	4.4	5.5	7.3	10.0	13.5	18.5
	@ 40°C	15	22	32	48	68	100
Viscosity Index, ASTM D2270		230	> 200	> 200	> 200	> 200	> 200
Pour Point, ASTM D97, °C		-63	-54	-54	-51	-48	-48
Flash Point, ASTM D92, °C		175	180	207	221	216	216
Specific Gravity, 15.6°C (60°F), ASTM D1298		0.845	0.848	0.851	0.860	0.856	0.860
Density, 15.6°C (60°F), lbs/gal		7.04	7.06	7.09	7.16	7.13	7.16

Performance Properties		ENVIROLOGIC® HF HP Series					
ENVIROLOGIC® Product Number		HF 15 HP	HF 22 HP	HF 32 HP	HF 46 HP	HF 68 HP	HF 100 HP
Foam Properties, ASTM D892	Sequence I, Tendency/Stability	50/0	50/0	50/0	50/0	50/0	50/0
	Sequence II, Tendency/Stability	50/0	50/0	50/0	50/0	50/0	50/0
	Sequence III, Tendency/Stability	50/0	50/0	50/0	50/0	50/0	50/0
Demulse Properties, ASTM D1401	Oil/Water/Emulsion	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0
	Minutes	5	5	5	10	15	15
TOST, ASTM D943M, Hours to 2.0 TAN		> 1500	> 1500	> 1500	> 1500	> 1500	> 1500
RPVOT, ASTM D2272, Minutes to 25 psi Loss		> 400	> 400	> 400	> 400	> 400	> 400

\*As per OECD 301B

\*\*CFR40 Part 435B

# ENVIROLOGIC® HF HP SERIES

Performance Properties (cont.)		ENVIROLOGIC® HF HP Series					
ENVIROLOGIC® Product Number		HF 15 HP	HF 22 HP	HF 32 HP	HF 46 HP	HF 68 HP	HF 100 HP
Hydrolytic Stability, ASTM D2619	Copper Weight Loss, mg/cm <sup>3</sup>	-	-	0	0	0	0
	Change in TAN mg KOH/g	-	-	0	0	0	0
	Appearance of Copper Panel	-	-	1b	1b	1b	1b
Four Ball Wear, 75°C, 1200 rpm, 40kg, 1hr		-	-	-	0.34	-	-
Biodegradability, OECD 301B, %		> 60	> 60	> 60	> 60	> 60	> 60
Aquatic Toxicity	Fathead Minnow LC50 ppm, 96 h	> 1,000	> 1,000	> 1,000	> 1,000	> 1,000	> 1,000
	Daphnia Magna, EC50 ppm, 48 h	> 100	> 100	> 100	> 100	> 100	> 100
	Algae EC50, ppm	> 100	> 100	> 100	> 100	> 100	> 100
Elastomer Compatibility	SRE-NBR (100°C, 168 hours)	Pass	Pass	Pass	Pass	Pass	Pass
	HNBR (100°C, 168 hours)	Pass	Pass	Pass	Pass	Pass	Pass
	FKM (150°C, 168 hours)	Pass	Pass	Pass	Pass	Pass	Pass
	PU (100°C, 168 hours)	Pass	Pass	Pass	Pass	Pass	Pass
Vickers V104C Pump Test		-	-	Pass	Pass	Pass	Pass
Vickers 35VQ25		-	-	Pass	Pass	Pass	Pass
Denison T6H20C Pump (HF-1, HF-2, HF-6)		-	-	Pass	Pass	Pass	Pass
FZG, ASTM D5182		-	-	11 Pass	12 Pass	12 Pass	12 Pass

\*Biodegradability by OECD 301B method.

## OEM Approvals

ENVIROLOGIC® HF HP Series meets the requirements for most original equipment manufacturers. Please contact customer service for a full list of OEM approvals.



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

