

ANDEROL® BIO GUARD FRHF 46 and 68

HIGH PERFORMANCE BIODEGRADABLE FIRE RESISTANT HYDRAULIC FLUIDS (ISO VG 46 & 68)

DESCRIPTION

ANDEROL® BIO GUARD FRHF 46 AND 68 are synthetic polyolester-based hydraulic fluids specifically designed to meet the most rigorous fire resistant requirements including spray flammability. In addition, the lubricants are readily biodegradable according to the OECD 301B standard.

APPLICATIONS

ANDEROL® BIO GUARD FRHF 46 AND 68 are highly recommended for hydraulic systems in high, low or broad temperature range environments that require a greater degree of fire resistance than that offered by conventional mineral oil-based fluids. They are also suitable for applications where environmentally sensitive products are preferred such as off-road construction vehicles and machinery.

FEATURES and BENEFITS

- Inherent high viscosity indices provide broad operating temperature range
- High flash point provides excellent fire resistance
- Ester-based, ashless and silicon-free fluid provides clean performance improving system reliability
- Excellent biodegradation and aquatic toxicity testing provides “eco-friendly” product
- Unique formulation provides excellent compatibility with other fire-resistant fluids allowing for easier changeover procedure

APPROVALS and SPECIFICATIONS

- Successfully passed the Factory Mutual Spray Flammability tests and meets FM Standard 6930
- Successfully passed the Vickers 104C and 35VQ 25A pump tests



TYPICAL PROPERTIES:

PROPERTIES	TEST METHOD	ANDEROL® Bio Guard FRHF 46	ANDEROL® Bio Guard FRHF 68
Viscosity, cSt	ASTM D 445		
@40°C		45.6	66.2
@100°C		9.21	12.11
Viscosity Index	ASTM D 2270	190	183
Pour Point, °C	ASTM D 97	-30	-42
Flash Point, COC, °C	ASTM D 92	313	313
Fire Point, °C	ASTM D 92	>350	>350
Specific Gravity, 60°F	ASTM D 4052	0.921	0.928
Copper Strip Corrosion, ASTM	ASTM D 130	1B	1B
Demulsibility @ 54°C, ml oil/water/emulsion (min)	ASTM D 1401	42/38/0 (<30)	42/38/0 (<30)
Foam Test, Sequence I, ml initial/ml final	ASTM D 892	0/0	0/0
Acid number, mg KOH/g,	ASTM D 664	1.17	1.25

COMPATIBILITY

ANDEROL® BIO GUARD FRHF 46 and **68** are compatible with elastomers, seals and hoses generally used with conventional mineral oil-based products. Care should be taken when converting systems containing phosphate ester or polyalkylene glycol fluids. Please contact the ANDEROL Technical Support Group for detailed conversion instructions.

PACKAGING

ANDEROL® BIO GUARD FRHF 46 and **68** are available in 5-gallon pails and 55-gallon drums. Other packages may be available upon request.

ANBIOFRHF:REV112910

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