

FR BIOHYDRAN



LUBRICATION



Biodegradable, high-viscosity index anti-wear hydraulic oil

APPLICATIONS

Environmentally friendly biodegradable hydraulic fluids with reduced fire-hazard properties

- **FR BIOHYDRAN** is a high performance, biodegradable, anti-wear hydraulic fluid series. It is formulated from seed oil and is designed for hydraulic applications operating in environmentally sensitive areas or areas where spills may cause fires to occur. These fluids protect the environment from damage when accidental discharges occur.
- **FR BIOHYDRAN** has a high flash point and it meets the Factory Mutual tests for spray flammability and is classified as a less flammable fluid, category HF-D.
- **FR BIOHYDRAN** fluids provide excellent anti-wear protection for high pressure, high speed hydraulic pumps. They are formulated from specially selected vegetable base stocks and non-toxic additives. They exhibit 95% biodegradability after 21 days in the industry recognized CEC-L-33-A-94 biodegradability test. These fluids also satisfy the German Hygiene Institute's non-contamination class (WGK 0) for biodegradable lubricants.

SPECIFICATIONS

International and OEM specifications

- DENNISON HF-0
- CEC-L-33-A-94 BIODEGRADABILITY TEST
- GERMAN HYGIENE INSTITUTE - WGK 0
- VICKERS 35VQ25 and V104C

ADVANTAGES

Long equipment life and high operating reliability.

- Excellent anti-wear, anti-foam and anti-corrosion properties.
- Rapidly biodegradable in case of spills in environmentally sensitive areas
- Inert towards metals (non-staining and no corrosive wear).
- Good compatibility with elastomers and seals.
- Excellent water-oil separation properties.
- High fire point and meets Factory Mutual test category HF-D

TYPICAL PROPERTIES—FR BIOHYDRAN		
ISO Grade	46	68
Viscosity cSt @ 0°C (32 F) calculated	300	375
Viscosity at 40°C, cSt, ASTM D 445	47.5	62
Viscosity at 100°C, cSt, ASTM D 445	10	13
Viscosity Index, ASTM D 2270	202	214
Specific gravity @ 60/60°F (lbs./gal) ASTM D 1298	0.92 (7.7)	0.92 (7.7)
Pour point, °C ASTM D 97	-6 (-21)	0 (-18)
Flash point, COC, °F ASTM D 92	450 (234)	580 (304)
Acid number, mg KOH/gram ASTM D 664	0.7	0.9
Biodegradability, % 21 days (CEC-L-33A-94)	95	95
Operating range, F	0 to 250	10 to 250

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FR Biohydran Series
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