



BIOHYDRAN AW

(Biodegradable AW Hydraulic Fluid)

BIOHYDRAN AW is a high performance biodegradable anti-wear hydraulic fluid series. It is developed for hydraulic systems operating in environmentally sensitive areas.

BIOHYDRAN AW hydraulic fluids provide excellent anti-wear protection for high pressure, high speed hydraulic pumps equivalent to that of petroleum hydraulic oils. They satisfy the pump test specifications set by pump manufacturers including Denison HF-0, Vickers 35VQ25 and V104C. **BIOHYDRAN AW** hydraulic fluids also provide excellent rust and corrosion prevention properties. They are available in three viscosity grades: ISO 32, 46 and 68.

BIOHYDRAN AW hydraulic fluids perform in high pressure, high speed hydraulic systems like a petroleum-based oil. They are also environmentally friendly. **BIOHYDRAN AW** hydraulic fluids are formulated from specially selected vegetable oil and non-toxic additives. They exhibit 95% biodegradability after 21 days in the industry recognized CEC-L-33-A-94 biodegradability test. They satisfy the German Hygiene Institute's non-contamination class (WGK 0) for biodegradable lubricants. It should be noted that, as of this printing, there are no specific biodegradability requirements for lubricants in the United States.

The biodegradability of **BIOHYDRAN AW** hydraulic fluids protects the environment from damage when accidental discharges occur. With petroleum hydraulic oils, a hose break can cause substantial environmental damage. The US EPA estimated that one gallon of used petroleum oil spilled on the ground can contaminate one million gallons of groundwater. Some state or local environmental regulatory agencies require formal notification of spills as small as 25 gallons. Often the contaminated soil must

be removed and remediated or sent to a landfill or incinerated. In contrast, a small discharge of biodegradable fluids minimizes potential harm to groundwater or the environment since microorganisms would rapidly consume the contaminant.

BENEFITS:

- EXCELLENT WEAR AND CORROSION PROTECTION EQUAL TO PETROLEUM OILS
- 95% BIODEGRADABLE (CEC-L-33-A-94)
- LOW ECOTOXICITY (WGK 0)
- COMPATIBLE WITH PETROLEUM UNIVERSAL OILS, COATINGS AND SEALS

APPLICATIONS:

BIOHYDRAN AW hydraulic fluids are recommended for a wide variety of hydraulic systems operating at both high and low pressures. They are especially suitable for applications in environmentally sensitive areas where accidental leaks and spills can cause environmental damage. **BIOHYDRAN AW** hydraulic fluids are miscible with conventional petroleum hydraulic oils and compatible with coatings and seal materials commonly used in hydraulic systems.

Although environmental discharges of any hydraulic oil should be avoided, a small accidental release of **BIOHYDRAN AW** hydraulic fluids will not adversely affect groundwater or the environment. However, these products may become potentially hazardous if they are contaminated with petroleum oils or other materials that pose an environmental threat.



BIOHYDRAN AW

(Biodegradable AW Hydraulic Fluid)

TYPICAL CHARACTERISTICS

ISO Viscosity Grade	32	46	68
Product Code	95060	95061	95062
Color (ASTM D 1500)	0.5	0.5	0.5
API Gravity (ASTM D 1298)	23.5	21.7	22.1
Viscosity (ASTM D-445)	34	46	64
cSt @ 40°C	8.0	10.8	14.5
cSt @ 100°C	172	230	318
SUS @ 100°F	53	63	77
SUS @ 210°F			
Viscosity Index (ASTM D-2270)	219	237	240
Pour Point (ASTM D-97) °F (°C)	-10 (-23)	-30 (-34)	-25 (-32)
Flash Point (ASTM D-92) °F (°C)	545 (285)	565 (296)	550 (288)
Biodegradability			
21 days (CEC-L-33-A-94)	>95%	>95%	>95%
Four Ball Wear (ASTM D-2266)			
Scar Diameter, mm	0.34	0.34	0.34
Rust Test (ASTM D-665)			
Distilled Water	Pass	Pass	Pass
Synthetic Sea Water	Pass	Pass	Pass
Copper Corrosion (ASTM D-130)	1a	1a	1a

The above data is subject to usual manufacturing variation. For more information or available, please call 1-800-442-LUBE.
10/09/01