



# FRW FLUID

## (Fire Resistant Water-In-Oil Hydraulic Fluid)

**FRW FLUID** is an economical water-in-oil type fire resistant hydraulic fluid designed to provide performance for hydraulic systems where safety concerns demand the unique properties of this fluid.

**FRW FLUID** is formulated as a fluid with excellent lubricity, antiwear, rust protection and defoamants.

**FRW FLUID** should not be exposed to freezing temperatures since cold temperature may slowly break the emulsion. **FRW FLUID** resists freezing but should be stored inside to maintain its integrity. This product provides excellent corrosion resistance to bronze, copper and steel metallurgy and it exhibits superior antifoam properties.

**FRW FLUID** is compatible with most kinds of pumps including vane, piston and gear type units. Maximum pressure for **FRW FLUID** is lower than for mineral oil-based antiwear hydraulic fluids due to the presence of water in the fluid. Systems should be operated under 2000 psi and temperature should not exceed 150 F to avoid excessive water loss. Most systems will operate 10 degrees cooler with this product than with a mineral oil.

### APPLICATIONS:

**FRW FLUID** is recommended for underground coal mining, steel or aluminum producing industries; die casting plants, power transmission plants, and foundries where a low-pressure, fire-resistant fluid is needed.

**FRW HYDRAULIC FLUID** meets factory mutual test requirements for an invert

emulsion fire resistant fluid (category HF-B). Operating system temperatures should not exceed 175F.

**FRW FLUID** is recommended for applications calling for an invert water emulsion hydraulic fluid such as: Denison, Factory Mutual etc.

### BENEFITS:

- SUPERIOR FIRE RESISTANCE
- COMPATIBLE WITH OTHER INVERT EMULSIONS
- EXCELLENT LUBRICITY & CORROSION PROTECTION

### CARE AND MAINTENANCE

Operation of fire resistance fluids such as **FRW FLUID** requires periodic monitoring to maintain its fire resistance and viscosity. The percent water level in the fluid needs to be maintained from 37 to 43 weight percent to be fire resistant. Water content can be determined with the use of an emulsion breaker chemical. Recommendations on water additions are shown below.

Contact your representative for details on our service maintenance program for this product.

Avoid filters and strainers on the pump inlet side of the system. Verify with filter manufacturers that their filters are compatible with a water-containing fluid.



# FRW FLUID

## (Fire Resistant Water-In-Oil Hydraulic Fluid)

### TYPICAL CHARACTERISTICS

Product Code	15375
Appearance	Milky White Liquid**
ISO Viscosity Grade	na
Specific Gravity (ASTM D-1298)	0.921
Density, lb/gal	7.67
Viscosity, (ASTM D-445)	
SUS @ 100 °F	600
cSt @ 40 °C	119
Freezing Point, °F, (°C)	29 (-2)
Percent water (fire resistant levels)	38-43
Flash and Fire Point	Fire resistant, contains water
Solubility in water	Insoluble
Factory Mutual Category	HF-B

\*\* Invert emulsions are milled to disperse the water in oil. Prolonged storage stability will cause sedimentation into light and heavy

layers.

A small amount of oil separation during normal storage is to be expected  
 The above data is subject to usual manufacturing variation. For more information and availability, call 1-800-442-LUBE.  
 3/01/2006

### RECOMMENDED ADDITIONS FOR FRW FLUID

Viscosity Range, SUS @ 100 F	<u>Fluid to be Added</u>	<u>Gallons to be added per 100 gallons fluid</u>
<b>500-600</b>	None	0
<b>450</b>	Water	5
<b>400</b>	Water	10
<b>350</b>	Water	15