

# Technical Bulletin

## Plurasafe® WGF 46 5K High Performance, Water Glycol, Fire-resistant Hydraulic Fluid



The Chemical Company

**BASF Corporation's Plurasafe® WGF 46 5K water-glycol hydraulic fluid**, is especially designed to meet the demands of today's hydraulic systems. Our proprietary inhibitor package in this fluid will protect the entire hydraulic system against wear, corrosion and damage. The water in this fluid reduces the hazard of fire.

### Flammability properties

Plurasafe® WGF 46 5K water glycol hydraulic fluid is certified as "FM approved" by FM Approvals; the certification and testing group within FM Global (formerly Factory Mutual). The fluid exhibits no flash or fire point. In an extreme heat situation for a prolonged period of time, water can boil out of the fluid.

### Wear protection

Plurasafe® WGF 46 5K water glycol hydraulic fluid is designed to pass the ASTM D7043 method (formerly ASTM D2882) the performance test run at 2,000 psi, at 150F, 1200rpm for 100 hour using a Vickers V104C vane pump.

### Corrosion protection

Corrosion tests indicate the fluid provides excellent corrosion protection of common metals in both liquid and vapor phases. However, systems utilizing solder, tin, lead, zinc, magnesium or cadmium should not use water-glycol fluids since such fluids may be corrosive to these metals.

### Compatibility with other fluids

The Plurasafe® WGF 46 5K water glycol hydraulic fluid is compatible with all high quality water-glycol hydraulic fluids in any proportion. It is not compatible with other types of hydraulic fluids such as mineral oil, water-oil emulsions, vegetable oil, synthetic phosphate ester, or ester-based fluids, and should not be mixed with these products.

### Effects on elastomers

Experience indicates nitrile (Buna N) and neoprene seals and packings, normally used for petroleum oils, are satisfactory for use with Plurasafe® WGF 46 5K water glycol hydraulic fluid. Silicone, butyl, and ethylene-propylene are also suitable materials. Do not use asbestos, leather, paper, natural or cork-impregnated materials.

### Shipping information

Plurasafe® WGF 46 5K water glycol hydraulic fluid is available from stock. Shipments are made in 55-gallon steel drums or bulk, in tan cars or tank trucks. The freight classification is Hydraulic System Fluid. It is considered a non-hazardous product by D.O.T.

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### Typical fluid properties of Plurasafe® WGF 46 5K Hydraulic Fluid

Properties	Method	Values
Appearance	Visual	Red, liquid
Viscosity @ 40°C, cSt	ASTM D445	45
Viscosity index	ASTM D2270	> 180
pH @ 25°C	as is	9.5
Residual Alkalinity, mL	ASTM D 1121	18
Pour Point, °F	ASTM D97	-55
Yellow Metal Corrosion	ASTM D 130	pass (1a)
Rust test	ASTM D665 A&B	pass
Flash Point, (C.O.C.), °C	ASTM D92	none
Four Ball Wear (mm)	ASTM D2266	0.65
Vickers Pump Test (mg)	ASTM D7043	Pass, <20

### Warning

Plurasafe® WGF 46 5K water glycol hydraulic fluid may be harmful to human, if swallowed or inhaled. Therefore, it is stressed that good industrial hygiene practices be exercised. Avoid breathing vapors of the heated product. Wear protective clothing to avoid prolonged or repeated skin contact. Use appropriate eye protection to prevent accidental eye contact. Should Plurasafe® WGF 46 5K water glycol hydraulic fluid be ingested, empty the stomach immediately and get medical attention. In case of eye contact rinse eyes with cool water immediately. See a physician if irritation develops. Spills on the skin should be washed off with cool water. Remove contaminated clothing and laundry before wearing again.

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