

Hyrando FRZ

Fire-Resistant Water-Glycol Hydraulic Fluid

Hydraulic equipment is being used more and more widely as the equipment's performance improves. Now hydraulic devices are often used near flames and high-temperature objects, where there is a risk of fire if the hydraulic fluid leaks out or the equipment ruptures. An effective method for preventing such fires and improving work safety is to use a fire-resistant hydraulic fluid. **Hyrando FRZ** is a water-glycol hydraulic fluid with a water content of about 40%, and it provides excellent fire resistance, chemical stability, and lubricating properties.

● SPECIAL FEATURES

1. Excellent Fire Resistance

Because about 40% of **Hyrando FRZ** is water, it resists combustion and reduces the danger of fire.

2. Outstanding Lubricity

Thanks to its outstanding wear prevention, **Hyrando FRZ** prevents wear to pumps and the interiors of hydraulic systems for long periods of time. It also has long rolling fatigue life, so it prevents fatigue wear to the bearings of piston pumps and other machinery.

3. Superb Corrosion Prevention

Hyrando FRZ is very effective at preventing corrosion, so it provides superb rust and corrosion prevention for cast iron, steel, copper alloys, aluminum alloys, and other types of metal.

4. Excellent Thermal and Oxidative Stability

Hyrando FRZ is blended with carefully chosen oxidation inhibitors that ensure excellent oxidative stability.

5. Extremely Good Temperature Characteristics

Hyrando FRZ has a high viscosity index, so it undergoes little change in viscosity due to variations in temperature. It also has a low pour point. As a result, it maintains sufficient viscosity and keeps hydraulic pumps operating smoothly even when the ambient temperature changes sharply.

● PRECAUTIONS FOR USE

1. Materials

Although **Hyrando FRZ** has low corrosivity against

most metals, it may form sediment or sticky substances in the presence of zinc, magnesium and cadmium. Refrain from using **Hyrando FRZ** with these metals.

2. Sealing Materials

Choose the optimal sealing material from among nitrile rubber, butyl rubber, ethylene propylene rubber, fluorinated rubber, silicone rubber, etc. Avoid using urethane rubber and absorptive materials such as asbestos, leather, and cork.

● APPLICATIONS

Die cast machines, iron and steel casting equipment, hot rolling mills, and furnaces.

● CONTAINERS

200-liter drums and 20-liter pail cans.

● TYPICAL PROPERTIES OF HYRANDO FRZ

Grades	32	46
Appearance	Clear red	Clear red
Density(15°C)	1.054	1.079
Kinematic viscosity(40°C) g/cm ³	31.7	51.2
Kinematic viscosity(100°C) mm ² /s	6.23	9.92
Viscosity index	150	184
Pour point	< -45	< -45
pH	10.3	10.3
Reserve alkalinity	16.5	16.5
Moisture content (KF method) %	40	41

Note: The typical properties may be changed without notice. (Sep. 2009)



Handling Precautions

▼ Follow these precautions when handling this product.

Composition :	Propylene glycol, Water, Additives
Precautionary :	Not applicable
Signal word :	Warning
Hazard Statement :	Causes eye irritation
Precautionary Statements: Prevention	<ul style="list-style-type: none">• Do not handle until all safety precautions have been read and understood.• Wear protective gloves/protective clothing/eye protection/face protection.• Do not allow the eyes to become exposed to the product. Do not swallow the product.• Obtain special instructions before use.• Wash hands thoroughly after handling.• Do not eat, drink or smoke when using this product.
Response	<ul style="list-style-type: none">• IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.• If the eyes are exposed to the product: Rinse the eyes with plenty of running water and immediately contact a physician.• IF ON SKIN: Wash with plenty of soap and water.• IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.• If eye irritation persists : Get medical advice/attention.
Storage	<ul style="list-style-type: none">• The product must be stored in a cool, well-ventilated location where it will not be exposed to direct sunlight.• Containers that have been opened must be tightly sealed.
Disposal	<ul style="list-style-type: none">• Dispose of contents/container in accordance with local/regional/national/international regulations.• If there are any doubts about proper methods of handling the product, contact the point of purchase before proceeding with usage.