

HYRANDO FRZ

Fire-Resistant Water-Glycol Based Hydraulic Fluid

Hydraulic systems are widely used in various industrial applications, including high-temperature environments such as die-casting machines and heating furnaces. **HYRANDO FRZ**, a water-containing fire-resistant hydraulic fluid, offers superior fire resistance, significantly reducing the risk of fire in the event of a leak in high-temperature facilities. In addition to its excellent fire-resistant property, **HYRANDO FRZ** also exhibits superior lubricity, corrosion protection, thermal and oxidation stability, as well as outstanding temperature-viscosity characteristics.

● SPECIAL FEATURES

1. Excellent Fire Resistance

HYRANDO FRZ contains about 40% water and exhibits greater fire resistance than mineral oil-based hydraulic fluids. In case of a leak, it is capable of substantially reducing the risk of fire.

2. Superior Lubricity

HYRANDO FRZ, featuring carefully selected additives, provides superior lubrication that significantly reduces wear in pumps and hydraulic systems over extended periods.

3. Exceptional Corrosion Protection

HYRANDO FRZ exhibits exceptional corrosion protection performance, offering almost no corrosivity to a wide range of metals including cast iron, steel, copper alloys and aluminum alloys.

4. Superior Thermal and Oxidation Stability

HYRANDO FRZ achieves superior oxidation stability through the use of carefully selected additives.

5. Outstanding Temperature-Viscosity Characteristics

HYRANDO FRZ is a hydraulic fluid with high viscosity index and low pour point, exhibiting smaller viscosity changes with temperature fluctuations compared to standard mineral-based hydraulic fluids. **HYRANDO FRZ** maintains the necessary viscosity for pump operation even in the face of substantial ambient temperature change.

● PRECAUTIONS FOR USE

1. Compatibility with Metal Materials

While **HYRANDO FRZ** is generally non-corrosive to most metals, it can produce deposits or gummy residues when used with zinc, magnesium, and cadmium, like other water-glycol-based hydraulic fluids. Therefore, avoid using **HYRANDO FRZ** with these specific metal materials.

2. Compatibility with Seal Materials

Please use seal materials such as nitrile rubber, butyl rubber, ethylene-propylene rubber, fluorocarbon rubber and silicone rubber. Refrain from using highly hygroscopic materials like leather and cork, as well as urethane rubber, which are not suitable for use with **HYRANDO FRZ**.

3. Compatibility with Paints

Generally, water-glycol-based hydraulic fluids have the property of dissolving paints, so please avoid painting the interior of oil tanks.

● APPLICATIONS

Suitable for hydraulic systems in die casting machines, heating furnaces, iron and steel casting facilities, and hot rolling mills.

● CONTAINERS

200-liter drum and 20-liter pail can

● **TYPICAL PROPERTIES OF HYRANDO FRZ**

ISO Viscosity Grade		32	46
Appearance		Clear red	Clear red
Density (15°C)	g/cm ³	1.054	1.079
Kinematic viscosity (40°C)	mm ² /s	31.7	50.9
Kinematic viscosity (100°C)	mm ² /s	6.23	9.88
Viscosity index		150	184
Pour point	°C	< -45.0	< -45.0
pH		10.3	10.4
Reserve alkalinity		15.8	15.8
Water content (KF method)	mass%	40	40

Note: The typical properties may be changed without notice. (May 2024)



Handling Precautions

▼ Follow these precautions when handling this product.

Composition :	Propylene glycol , Additives, Water
Hazard category:	Not applicable
Precautionary statements:	<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.
Prevention	<ul style="list-style-type: none"> • Do not allow the eyes to become exposed to the product. Do not swallow the product. • 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/doctor. • 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.
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.