



5353 Spring Grove Avenue, Cincinnati, OH 45217 USA 513-471-8770

## Material Safety Data Sheet

### Section 1 - Product Identification

Product Name: FRH-200 Fire Resistant Hydraulic Fluid

#### Hazard Rating

	Health	Fire	Reactivity	
NFPA Code:	2	1	0	
0=Least	1=Slight	2=Moderate	3=High	4=Extreme

### Section 2 - Hazardous Ingredients / Identity Information

Specific Identity; Common Names	OSHA PEL	ACGIH TLV	Other
110-91-8 Morpholine	20 ppm (skin)	20 ppm (skin)	
111-46-6 Diethylene Glycol	-	-	
7732-18-5 Water	-	-	

### Section 3 - Physical/Chemical Characteristics

Appearance	Red liquid
Boiling Point, Deg. F	215
Evaporation, BuAcetate=1	Slower than
Odor	Mild glycol
Solubility in water	Complete
Vapor Density (Air=1)	Not Known
Vapor Pressure	Not Known
Pounds per Gallon	8.9618
Specific Gravity	1.0761

### Section 4 - Fire and Explosion Hazard Data

Flash Point COC: NA Flammable Limits: LEL-Not Known UEL-Not Known  
 Extinguishing Media: Foam, dry chemical, water fog, carbon dioxide.  
 Special Fire Fighting Procedures: Cool fire exposed containers with water.  
 Do not enter a confined fire space without full bunker gear and NIOSH approved supplied air breathing apparatus.  
 Unusual Fire and Explosion Hazards: Product is water based and will not burn until water has evaporated.

### Section 5 - Reactivity Data

Stability - Stable.  
 Incompatibility - Strong oxidizing agents.  
 Hazardous Decomposition Products - Oxides of carbon.  
 Hazardous Polymerization - Will not occur.  
 Other - Not Applicable.

### Section 6 - Health Hazard Data

Routes of Entry: Inhalation=yes Skin=yes Ingestion=yes  
 Health Hazards :  
 Health hazards for components to this mixture are listed below:  
 (Acute and Chronic Overexposure)



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Eyes - Irritation.

Skin - Irritation.

Inhalation -

Acute overexposure to a component of this product can result in respiratory irritation, increased saliva, and tremors.

Ingestion -

Acute ingestion overexposures to large doses of diethylene glycol, a component of this product, may produce nausea, vomiting, gastrointestinal cramping, CNS effects, diarrhea, liver necrosis, renal tubular degeneration and even death.

Signs And Symptoms of Exposure - As Noted Above.

Medical Conditions Generally Aggravated By Exposure - None Known.

Other Precautions - NA

Other -

Chronic overexposures via ingestion may produce liver and kidney damage.

Carcinogenicity NTP-No IARC-No OSHA-No

Emergency and First Aid Procedures:

Inhalation - remove to fresh air. If breathing is difficult, give oxygen. If breathing is stopped, begin artificial respiration. Get medical attention.

Skin contact - wash skin thoroughly with soap and water. Remove and wash contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of the injury.

Eye contact - flush with water for at least 15 minutes or until irritation subsides, get medical attention.

Ingestion - DO NOT induce vomiting; get medical attention immediately.

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### Section 7 - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled:

Dike area. Recover free product. Add a dry absorbent material to spill area.

Waste Disposal Method: Dispose by methods consistent with local state and federal regulations.

Precautions to be Taken in Handling and Storing: Keep containers tightly closed. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. To dissipate static electricity during transfer, ground and/or bond both containers. Since emptied containers retain product residue, follow warnings even after container is emptied. Residue or vapors may explode on ignition; do not cut, drill, grind or weld on or near container even when empty.

Other Precautions:

Not Applicable

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### Section 8 - Control Measures

Respiratory Protection: Not normally required. Use NIOSH approved supplied

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air breathing equipment if vapors are excessive.

Ventilation: Local Exhaust : Not normally required.

Mechanical (General): Use general ventilation.

Protective Gloves: Use chemical-resistant gloves, if needed, to avoid skin contact.

Eye Protection: Use splash goggles or face shield when eye contact may occur.

Other Protective Clothing or Equipment: To prevent repeated or prolonged skin contact, wear impervious apron/clothing and boots.

Work/Hygienic Practices: Minimize breathing vapor, mist or fumes. Wash skin with soap and water after contact. Launder contaminated clothing.

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### Section 9 - Regulatory Information

#### DOT Information

DOT Proper Shipping Name: None

DOT Hazard Code: None

UN Number: None

#### TSCA

All components of this product are included in the TSCA inventory or are regulated under FIFRA.

#### Section 313 Supplier Notification

This product contains the following chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

CAS#	Common Name	Weight%
	None	

This information should be included in all MSDSs that are copied and distributed for this material.

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Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) by CCI Inc.

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**End of MSDS**

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