



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material Name** FRW-200  
**Revision Date** 1/16/2014  
**Version #** 04  
**Product Use** Friction reducer  
**Manufacturer / Supplier** FTS International Services, LLC  
2500 HWY 62 West  
Chickasha, OK 73018  
US  
General information: 1-405-222-2300  
**Emergency** 24 Hour Emergency: INFOTRAC: 1-800-535-5053

## 2. Hazards Identification

**Physical State** Liquid  
**Appearance** White, mobile liquid.  
**Emergency Overview** CAUTION: May cause eye and skin irritation. Spills of this product are very slippery.  
**OSHA regulatory status** Not available.  
**Routes of exposure** Overexposure to petroleum distillates has been found to cause liver and kidney damage in laboratory animals.  
**Eyes** Direct contact with this material may cause mild eye irritation.  
**Skin** Repeated or prolonged dermal contact with this material may cause skin irritation.  
**Inhalation** Not available.  
**Ingestion** Not available.  
**Potential environmental effects** Not available.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Petroleum distillate hydrotreated light	64742-47-8	17.6 – 26

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First Aid Measures

### First aid procedures

**Eye Contact** In case of eye contact, immediately irrigate with plenty of water for 15 minutes. Obtain medical attention if irritation persists or if otherwise necessary.  
**Skin Contact** Do not reuse contaminated clothing without laundering. Wash immediately with plenty of water. Remove contaminated clothing and shoes without delay. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.  
**Inhalation** Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.  
**Ingestion** Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. If swallowed, call a physician immediately.  
**Notes to physician** Not available.

## 5. Fire Fighting Measures

**Flammable Properties** Not available.

**Extinguishing media****Suitable extinguishing media** Use water spray, carbon dioxide, or dry chemical.**Unsuitable extinguishing media** Not available.**Specific Hazards arising from the Chemical** Not available.**Firefighting equipment / instructions**

Wear full firefighting protective clothing. See MSDS Section 8, Firefighters, and others exposed, wear self-contained breathing apparatus.

**Specific Methods**

Keep containers cool by spraying with water if exposed to fire.

**Hazardous combustion products** Not available.**6. Accidental Release Measures****Personal precautions**

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8, wear impermeable boots.

**Methods for cleaning up**

Spilled material should be absorbed onto an inert material and scooped up. Flush spill area with water. Product may cause a slip hazard. If slipperiness remains apply more dry-sweeping compound.

**7. Handling and Storage****Handling**

Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. It is recommended that the entire contents of the container be agitated prior to use. Provide good ventilation of working area (local exhaust ventilation if necessary).

**Storage**

Avoid storing at elevated temperatures. Keep from freezing. Store at 5° – 27°C / 41°– 80.6° F.

**8. Exposure Controls / Personal Protection****Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Petroleum distillate hydrotreated light	Not available.	Not available.	Not available.	Not available.

**US. OSHA Table Z-1 Limits for Air Contaminates (29 CFR 1910.1000)**

Components	PEL	
	ppm	mg/m3
Petroleum distillate hydrotreated light	500	1200

**Canada. Alberta OELs (Occupational Health Safety Code, Schedule 1, Table 2)**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Petroleum distillate hydrotreated light	Not available.	Not available.	Not available.	Not available.

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Petroleum distillate hydrotreated light	Not available.	Not available.	Not available.	Not available.

**Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) Components**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Petroleum distillate hydrotreated light	Not available.	Not available.	Not available.	Not available.

**Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) Components**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Petroleum distillate hydrotreated light	Not available.	Not available.	Not available.	Not available.

**Mexico. Occupational Exposure Limit Values**

Components	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Petroleum distillate hydrotreated light	Not available.	Not available.	Not available.	Not available.

**Engineering controls** Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

**Personal protective equipment**

**Eye / face protection** Appropriate eye protection, including safety goggles, face shield, or a full face respirator, is required.

**Skin protection** Wear impermeable gloves and suitable protective clothing. Avoid skin contact.

**Respiratory protection** Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure.

**General hygiene consideration** Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use.

**9. Physical and Chemical Properties**

<b>Appearance:</b>	White viscous liquid.
<b>Color</b>	Milky white
<b>Odor</b>	Slight petroleum oil
<b>Odor threshold</b>	Not Available.
<b>Physical State</b>	Liquid
<b>Form</b>	Liquid
<b>pH</b>	6 – 8 (upon dilution in water)
<b>Melting point</b>	< 20° F (< -6.66° C)
<b>Freezing point</b>	< 20° F (< -6.66° C)
<b>Boiling point</b>	> 212° F (>100°C)
<b>Flash point</b>	> 210 F (>93.9°C)
<b>Evaporation rate</b>	<1 (Butyl acetate = 1)
<b>Flammability limits in air, upper, % by volume</b>	Not Available.
<b>Flammability limits in air, lower, % by volume</b>	Not Available.
<b>Vapor pressure</b>	Not Available.
<b>Vapor density</b>	Not Available.

<b>Specific Gravity</b>	1.06 – 1.08 @ 77°F / 25°C
<b>Solubility (water)</b>	Limited by viscosity
<b>Partition coefficient (n-octanol/water)</b>	Not Available.
<b>Auto-ignition temperature</b>	Not Available.
<b>Decomposition temperature</b>	Not Available.
<b>Bulk Density</b>	8.92 lb/gal
<b>VOC</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Percent volatile</b>	Not available.

## 10. Chemical Stability Reactivity Information

<b>Chemical Stability</b>	This product is stable.
<b>Conditions to avoid</b>	Avoid elevated temperatures. Do not freeze.
<b>Incompatible material</b>	Oxidizing agents may cause exothermic reactions.
<b>Hazardous decomposition products</b>	Oxides of carbon, hydrocarbons, acrid vapors and fumes.
<b>Possibility of hazardous reaction</b>	Hazardous polymerization will not occur.

## 11. Toxicology Information

### Toxicological Data

#### Components

Petroleum distillate hydrotreated light

#### Test Results

Petroleum distillates, hydrotreated light (CAS # 64742-47-8) has acute oral (rat) and dermal (rabbit) LD50 values of >5 g/kg and >3.16 g/kg, respectively. Prolonged or repeated skin contact tends to remove skin oils, possible leading to irritation and dermatitis. Direct contact may cause eye irritation. Overexposure to high vapor concentrations > ≈70ppm, are irritating to the eyes and respiratory tract and may cause headaches, dizziness, drowsiness, and other central nervous system effects, including death. Aspiration of minute amounts during ingestion or vomiting may cause mild to severe pulmonary injury and possible death. In a 90-day oral gavage (rats) study at 100, 500, or 1000 mg/kg, no treatment-related mortalities were observed. There were no significant changes in body weights or food consumption in any dose groups. Increased liver weights were observed in male and female rats at 500 and 1000 mg/kg. Increased kidney weights were observed only in male rats at 500 and 1000 mg/kg/ Testes weights were significantly elevated in male rats at 1000 mg/kg. Kidney effects, indicative of light hydrocarbon nephropathy, occurred in male rats kidneys at all dose levels. Histological findings of hepatocellular hypertrophy were seen in the livers of male rats at 1000 mg/kg and female rats at 500 and 1000 mg/kg. All treatment-related effects were reversible within the 4-week recovery period. Observed kidney effects (including light hydrocarbon nephropathy and increased kidney weight) are a unique response by male rats to chronic hydrocarbon exposure, which the U.S. EPA has declared „not relevant to humans“. High-dose liver effects (including hepatocellular hypertrophy, or enlarged liver cells) are a direct consequence of a sustained high „hydrocarbon diet“. The No Observed Adverse Effect Level (NOAEL) for this study was 1000 mg/kg.

**Sensitization** Not available.

#### Carcinogenicity

Petroleum distillate hydrotreated light California Proposition 65 Warning (applicable in California only) – This product contains (a) chemical(s) known to the state of California to cause cancer.

**Epidemiology** Not available.

**Mutagenicity** Not available.

**Reproductive effects** Not available.

**Teratogenicity** Not available.

**Further Information** Not available.

## 12. Ecological Information

### Ecotoxicological data

#### Components

Petroleum distillate hydrotreated light

#### Test Results

Fish LC50/Danio rerio/96 hr > 100 mg/L (OECD 203)  
Algae IC50/Scenedesmus subspicatus /72 hr > 100 mg/L (OECD 201)  
Daphnia EC50/Daphnia magna/48 hr > 100 mg/L (OECD 202)

#### Ecotoxicity

Not available.

#### Persistence and degradability

Not readily biodegradable.

#### Bioaccumulation / Accumulation

Not available.

#### Mobility in environmental media

Not available.

#### Partition coefficient (n-octanol/water)

Not available.

## 13. Disposal Considerations

#### Waste codes

In accordance with federal, state, and local regulations.

#### Disposal instructions

Rinse empty containers with water and use the rinse water to prepare the working solution. Can be land filled or incinerated, when in compliance with local regulations.

#### Contaminated packaging

Not available.

## 14. Transport Information

### DOT

#### UN number

#### Proper shipping name

Not regulated

#### Hazard class

#### Packing Group

#### Labels required

#### DOT reportable quantity

Not available.

#### Additional information

#### Special provisions

#### Packaging exceptions

#### Packaging non bulk

#### Packaging bulk

#### ERG number

### IATA

#### UN number

#### Proper shipping name

Not regulated

#### Hazard class

#### Packing group

#### Additional information

#### ERG code

### IMDG

#### UN number

#### Proper shipping name

Not regulated

#### Hazard class

#### Packing group

#### EmS No

## 15. Regulatory Information

### US federal regulation

CERCLA (Superfund) Reportable Quantity: None

### Superfund amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard Categories</b>	Immediate Hazard:	Yes
	Delayed Hazard:	No
	Fire Hazard:	No
	Pressure Hazard:	No
	Reactivity Hazard:	No

Section 311 hazardous chemical: Acute

### Inventory Status

Country	Inventory Name	On Inventory *
Australia	AICS	No
Canada	DSL	Yes
Canada	NDSL	No
China	IECSC	Yes
Europe	EINECS	No
Europe	ELINCS	No
Japan	ENCS	Yes
Korea	ECL	No
New Zealand	NZI	No
United States / Puerto Rico	TSCA	Yes
Phillipines	PICCS	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

**WHMIS Information** Not available.

**State Regulation** The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains a chemical(s) known to the State of California to cause cancer: residual acrylamide.

## 16. Other Information

**Further Information** HMIS® is a registered trade and service mark of the NPCA.

**HMIS® ratings** Health: 1  
 Flammability: 1  
 Physical Hazard: 0  
 A HMIS® rating including an \* indicates a chronic hazard.

**NFPA ratings** Health: 1  
 Flammability: 1  
 Instability: 0

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