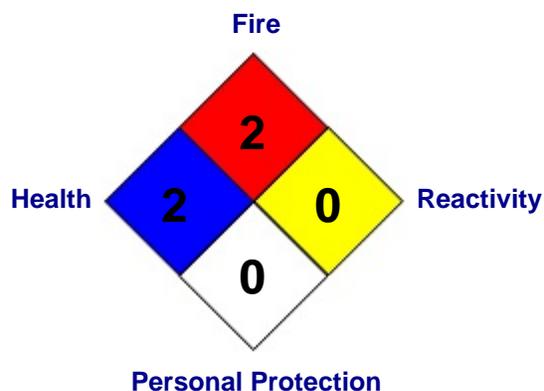




HMIS Hazard Rating:

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal



I. Chemical Product and Company Identification

Product Name: WFR-3B
Identification #: 35-470-1300
Product Use/Class: Friction Reducer
Supplier: Superior Well Services
Manufacturer: Superior Well Services
Emergency Contact: CHEMTREC 1 (800) 424-9300
Prepared By: RAA
Date Prepared: 03/12/2008

II. Composition/Information on Ingredients

Chemical Name: Hydrotreated Light Distillate
CAS Number: 64742-47-8
Percent by Mass Less Than: 10-30

Exposure Limits

Threshold Limit Value - Time Weighted Average: oil mist- 5 mg/m3
Threshold Limit Value - Short Term Exposure Limit: NI
Permissible Exposure Limit - Time Weighted Average: oil mist- 5 mg/m3
Permissible Exposure Limit - Ceiling: NI
Company Threshold Limit - Time Weighted Average: NI
Skin: NI

Chemical Name: Mineral Spirits
CAS Number: 8052-41-3
Percent by Mass Less Than: 10

Exposure Limits

Threshold Limit Value - Time Weighted Average: 100 ppm
Threshold Limit Value - Short Term Exposure Limit: NI
Permissible Exposure Limit - Time Weighted Average: 500 ppm
Permissible Exposure Limit - Ceiling: NI
Company Threshold Limit - Time Weighted Average: NI
Skin: NI

Chemical Name: Propylene Glycol
CAS Number: 57-55-6
Percent by Mass Less Than: 25

Exposure Limits

Threshold Limit Value - Time Weighted Average: NI
Threshold Limit Value - Short Term Exposure Limit: NI
Permissible Exposure Limit - Time Weighted Average: NI
Permissible Exposure Limit - Ceiling: NI
Company Threshold Limit - Time Weighted Average: NI
Skin: NI

Chemical Name: Ethoxylated Alcohols
CAS Number: 68551-12-2
Percent by Mass Less Than: 4

Exposure Limits

Threshold Limit Value - Time Weighted Average: NI
Threshold Limit Value - Short Term Exposure Limit: NI
Permissible Exposure Limit - Time Weighted Average: NI
Permissible Exposure Limit - Ceiling: NI
Company Threshold Limit - Time Weighted Average: NI
Skin: NI

III. Hazardous Identification

Emergency Overview:

Danger! Pale, off-white, viscous liquid, hydrocarbon odor. Combustible liquid and vapor. May cause eye and skin irritation. Harmful if ingested or inhaled.

Effects of Overexposure

Eye Contact:

May cause eye irritation and damage. This product contains mineral spirits. Vapors of mineral spirits may be irritating at concentrations of 450 ppm and above (15 minute exposure).

Skin Contact:

Skin contact may cause irritation or burning of the skin, especially with prolonged contact, due to the defatting nature of some product components. Symptoms may include soreness, inflammation, a burning sensation, dryness, cracking, and possibly dermatitis. Mineral spirits can be absorbed through the skin causing the effects listed under inhalation if the area of exposure is large.

Inhalation:

Inhalation of vapors of mineral spirits may cause central nervous system depression with symptoms that include dizziness and euphoria leading to unconsciousness in severe cases. Vapors may irritate the respiratory tract. Symptoms may include coughing, difficult breathing, and chest pain.

Ingestion:

Ingestion of the product component mineral spirits may be harmful or fatal causing irritation of the gastrointestinal tract and central nervous effects. Symptoms may include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, delirium, and other central nervous effects. Due to its light viscosity, there is a danger of aspirating mineral spirits into lungs during vomiting. Aspiration can result in severe lung damage or death. Progressive CNS depression, respiratory insufficiency, and ventricular fibrillation may also result in death. Ingestion of large quantities of the product component propylene glycol may cause gastrointestinal upset and temporary nervous system depression. The effects appear more severe in individuals with kidney problems.

Chronic Harards:

Chronic exposure to mineral spirits may lead to central nervous system complications, blood changes (aplastic anemia, a rare occurrence that is potentially fatal), and dermatitis. Animal studies have indicated the potential for liver and kidney damage. Based upon animal testing, the C9 aromatic hydrocarbon components (trimethylbenzenes and ethylmethylbenzenes of mineral spirits) may cause fatal effects. Lactic acidosis, stupor, and seizures have been reported following chronic ingestion of propylene glycol.

Primary Route(s) of Entry:	n	Skin Contact	n	Eye Contact	n	Ingestion
	n	Skin Absorbtion	n	Inhalation		

IV. First Aid Measures

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention if irritation persists.

Skin Contact:

Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing and shoes separately before reuse.

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

This product may present an aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE VOMITING. If vomiting occurs, keep head below hips to prevent aspiration into the lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

V. Fire Fighting Measures

Flash Point:	145 F (63 C)
Auto Ignition Temperature:	NI
Lower Explosive Temp.:	mineral spirits: .8 propylene glycol: 2.6
Upper Explosive Temp.:	mineral spirits: 6.0 propylene glycol: 12.5
Extinguishing Media:	CO2, Dry Chemical, Foam, Water Fog or Fine Spray Do not use direct water stream as it will spread the fire.
Unusual Fire and Explosive Harards:	Spills of this product produce extremely slippery surfaces. Spills of organic liquids on hot fibrous insulations may lead to lowering of the auto ignition temperatures possibly resulting in spontaneous combustion. Containers may explode when involved in a fire. Toxic gases and vapors may be released in a fire.
Special Fire Fighting Procedures:	Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

VI. Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:	Wear appropriate personal protective equipment as specified in Section VIII. Ventilate the area of the leak or spill. Remove all sources of ignition. Use non-sparking tools and equipment. Isolate the hazard area. Keep unnecessary and unprotected personnel from entering the area. Do not flush with water. Contain and recover the liquid when possible. Collect the liquid in an appropriate container. Then absorb the residue with an inert material (e.g. vermiculite, dry sand, earth), and place the used absorbent in a chemical waste container. Do not use combustible materials such as raw dust. Do not flush to the sewer! After cleaning, flush away traces with water.
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VII. Handling and Storage

Handling:	Avoid contact with eyes, skin or clothing. Avoid breathing vapors . Use with adequate ventilation. DO NOT take internally. Wear appropriate PPE. Wash thoroughly after handling.
Storage:	Keep container closed when not in use. Store in a cool, dry, well-ventilated safety storage cabinet or room with appropriate labels. Do not allow to freeze. Avoid elevated temperatures. Keep away from ignition sources and ground all equipment containing this material. Containers must be able to withstand expansion and/or pressures expected from warming and cooling in storage. Empty containers contain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Containers should be bonded and grounded for transfers to avoid static sparks.

VIII. Exposure Controls/Personal Protection

Engineering Controls:	Local exhaust and ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.
Skin Protection:	Wear impervious gloves, shoes, and protective clothing to prevent skin contact.
Eye Protection:	Wear safety glasses with side sheilds (or goggles) and a face shield.
Other Protective Equipment:	Emergency eyewash stations and deluge showers should be available in the work area.
Hygienic Practices:	Wash hands before eating.

IX. Physical and Chemical Properties

Boiling Point:	Not Determined	Vapor Density:	Not Determined
Odor:	hydrocarbon	Odor Threshold:	Not Determined
Appearance:	White to off white	Evaporation Rate:	Not Determined
Solubility in H2O:	Water dispersible	Specific Gravity:	.98-1.06 g/ml
Freeze Point:	-15 F (-26 C)	pH at 50.0%:	5-8
Vapor Pressure:	Not Determined	Viscosity:	Not Determined
Physical State:	Viscous Liquid		
Coefficient of Water Oil Distribution:	Not Determined		

X. Stability and Reactivity

Conditions to Avoid:	Heat, sparks, flames, other sources of ignition, and incompatibles.
Incompatibility:	Avoid contact with strong acids and strong oxidizers.
Hazardous Decomposition Products:	Carbon dioxide which can act as a asphyxiant. Carbon monoxide which is toxic if inhaled. Nitrogen oxides, ammonia, hydrocarbons, aldehydes, lactic acid, pyruvic acid, and/or acetic acid.
Hazardous Polymization:	Will not occur under normal conditions.
Stability:	This product is stable under normal storage conditions.

XI. Toxicological Properties

Toxicological Properties:	No product information is available.
Oral:	No product information is available.
Dermal:	No product information is available.
Inhalation:	No product information is available.

XII. Ecological Information

Ecological Properties:	No product information is available.
Ecotoxicity:	No product information is available.
Chemical Fate Information:	No product information is available.

XIII. Disposal Consideration

Disposal Method:	Consult local, state, and federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.
RCRA Status:	No product information is available.

XIV. Transportation Information

DOT Proper Shipping Name:	Combustible liquid, n.o.s.
DOT Technical Name:	(Contains Mineral Spirits)
DOT Hazard Class:	Comb liq
DOT Hazard Subclass:	
DOT UN/NA Number:	NA1993
Packing Group:	III
Resp. Guide Page:	

XV. Regulatory Information

OSHA:	Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)
TSCA Status:	All components of this product are listed on the Toxic Substance Control Act Inventory.
CERCLA SARA:	This product has been reviewed according to the EPA 'Hazard Categories' promulgated under the sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: Immediate Health Hazard, Chronic Health Hazard, Fire Hazard
SARA Section 313 Required Reporting:	

XVI. Other Information

Other Information: NA = Not applicable ND = Not Determined NI = No Information NE = Not Established

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, or when used in conjunction with other products, exposures must be evaluated by the user so that appropriate handling practices and training programs can be established to ensure safe workplace operations. This information is confidential to Superior Well Services, Ltd. (SWSI) and intended solely for the use of the individual or entity to whom they are directly distributed. Distribution or use beyond the individual or entity is strictly prohibited without the consent of SWSI.