



I. Chemical Product and Company Identification

Product Name: WFR-6W
Identification #: 35-470-1507
Product Use/Class: Friction Reducer
Supplier: Nabors Completion and Production Services
515 W. Greens Road, Suite 1100, Houston, TX 77067
Supplier Tracking Code: 2168
Emergency Contact: CHEMTREC 1 (800) 424-9300
Prepared By: LZ
Date Prepared: 04/29/2014

II. Composition/Information on Ingredients

Chemical Name: Anionic Water-Soluble Polymer in Emulsion
CAS Number: Proprietary
Percent by Mass Less Than: 100% non hazardous

Exposure Limits

Threshold Limit Value - Time Weighted Average: N/A
Threshold Limit Value - Short Term Exposure Limit: N/A
Permissible Exposure Limit - Time Weighted Average: N/A
Permissible Exposure Limit - Ceiling: N/A
Company Threshold Limit - Time Weighted Average: N/A
Skin: N/A

III. Hazardous Identification

Emergency Overview: CAUTION! Spills produce extremely slippery surfaces.
Form: Viscous liquid
Color: Milky
Odor: Aliphatic

Eye Contact: May cause eye irritation with susceptible persons
Skin Contact: Slightly irritating.
Inhalation: Not a significant hazard
Ingestion: Not a significant hazard
Chronic Harards: No information on this product is available.

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

IV. First Aid Measures

Eye Contact: Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Skin Contact: Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

Inhalation: Move to fresh air immediately. No hazards which require special first aid measures.

Ingestion: Rinse mouth with water. Do not induce vomiting. Get medical attention immediately.

V. Fire Fighting Measures

Flash Point: DOES NOT FLASH

Auto Ignition Temperature: Does not ignite.

Lower Explosive Temp.: Not Available

Upper Explosive Temp.: Not available

Extinguishing Media: Water. Water spray. Foam. Carbon dioxide (CO₂). Dry powder.

Unusual Fire and Explosive Harards: Spills produce extremely slippery surfaces.

Special Fire Fighting Procedures: NO SPECIAL PROTECTIVE EQUIPMENT REQUIRED.

VI. Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Personal precautions: No special precautions required. Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection). Keep people away from spill/leak.

Environmental precautions: As with all chemical products, do not flush into surface water.

Methods for cleaning up: Do not flush with water . Dam up. Soak up with inert absorbent material. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

VII. Handling and Storage

Handling: Avoid contact with skin and eyes. When preparing the working solution ensure there is adequate ventilation. When using do not smoke.

Storage: Keep in a dry cool place (0 - 30 °C). Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material.

Recommended storage temperature 30°F-95°F. Undercover storage preferred. Product does not freeze temperature. Product will remain but will thicken with decreasing usable down to around -30°F.

VIII. Exposure Controls/Personal Protection

Engineering Controls:	Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists
Respiratory Protection:	Not required ; except in case of aerosol formation.
Skin Protection:	Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely. PVC or other plastic material gloves.
Eye Protection:	Safety glasses with side-shields. Do not wear contact lenses where this product is used.
Other Protective Equipment:	NI
Hygienic Practices:	Wash hands before breaks and at the end of workday. When using do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

IX. Physical and Chemical Properties

Boiling Point:	Not available	Vapor Density:	Not available
Odor:	Aliphatic	Odor Threshold:	Not Determined
Appearance:	Viscous liquid	Evaporation Rate:	Not Available
Solubility in H2O:	See Technical Data Sheet (TDS)	Specific Gravity:	1.05
Freeze Point:	< -26oC (< -15oF)	pH at 50.0%:	6 - 8 @ 5 g/l
Vapor Pressure:	0,002 @ 20°C	Viscosity:	Bulk viscosity (cps): 1200 Kinematic viscosity @ 40°C (mm²/s): >>20.5
Physical State:	Liquid		
Coefficient of Water Oil Distribution:	Not Determined		

X. Stability and Reactivity

Conditions to Avoid:	Stable. Hazardous polymerization does not occur.
Incompatibility:	Oxidizing agents may cause exothermic reactions.
Hazardous Decomposition Products:	Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NOx), carbon oxides (COx).
Hazardous Polymization:	Will not occur.
Stability:	Stable under ordinary conditions of use and storage.

XI. Toxicological Properties

Toxicological Properties:	Skin: Slightly irritating. Eyes: May cause slight eye irritation. Sensitization: Not sensitizing. Chronic toxicity: No chronic effects.
Oral:	LD50/oral/rat > 5000 mg/kg
Dermal:	LD50/dermal/rat > 5000 mg/kg
Inhalation:	The product is not expected to be toxic by inhalation

XII. Ecological Information

Ecological Properties:	NI
Ecotoxicity:	Toxicity to fish: LC50/Danio rerio (Zebra fish)/96 hours > 100 mg/L (OECD 203). Toxicity to daphnia: EC50/Daphnia magna (Water flea)/48 hours > 100 mg/L (OECD 202). Toxicity to algae: EC50/Scenedesmus subspicatus (Green algae)/72 hours > 100 mg/L (OECD 201).
Chemical Fate Information:	NOT READILY BIODEGRADABLE. DOES NOT HYDROLYSE.

XIII. Disposal Consideration

Disposal Method: Dispose of in accordance with local, state and federal regulations. Prevent entry into sewers or waterways.

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

RCRA Status: Discarded product, as sold, would not be considered a RCRA Hazardous.

XIV. Transportation Information

DOT Proper Shipping Name: Not DOT Regulated

DOT Technical Name:

DOT Hazard Class:

DOT Hazard Subclass:

DOT UN/NA Number:

Packing Group:

Resp. Guide Page:

XV. Regulatory Information

OSHA: Non-hazardous
TSCA Status: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.
CERCLA SARA: Not concerned.
SARA Section 313
Required Reporting:

XVI. Other Information

Other Information: NA = Not applicable ND = Not Determined NI = No Information NE = Not Established
MSDS Updated: 11/9/2014
MSDS Printed: 1/9/2015

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 Nabors Completion & Production Services Company (Nabors) 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 Nabors.