



I. Chemical Product and Company Identification

Product Name: WFR-12W
Identification #: 35-470-1552
Product Use/Class: Friction Reducer
Supplier: Nabors Completion and Production Services
515 W. Greens Road, Suite 1100, Houston, TX 77067
Supplier Tracking Code: 2187
Emergency Contact: CHEMTREC 1 (800) 424-9300
Prepared By: LZ
Date Prepared: 05/06/2014

II. Composition/Information on Ingredients

Chemical Name: Anionic water-soluble polymer
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: Form: Viscous liquid
Color: Milky
Odor: Aliphatic
Potential Physical/Chemical Effects: Spills produce extremely slippery surfaces.

Eye Contact: May cause eye irritation with susceptible persons.
Skin Contact: May cause skin irritation with susceptible persons.
Inhalation: The product is not expected to be toxic by inhalation.
Ingestion: NI
Chronic Harards: Prolonged skin contact may defat the skin and produce dermatitis.

Primary Route(s) of Entry:	<input checked="" type="checkbox"/> Skin Contact	<input checked="" type="checkbox"/> Eye Contact	<input type="checkbox"/> Ingestion
	<input type="checkbox"/> Skin Absorbtion	<input type="checkbox"/> Inhalation	

IV. First Aid Measures

Eye Contact: Rinse thoroughly with plenty of water, also under the eyelids. In case of persistent eye irritation, consult a physician

Skin Contact: WASH OFF IMMEDIATELY WITH SOAP AND PLENTY OF WATER. IN CASE OF PERSISTENT SKIN IRRITATION, CONSULT A PHYSICIAN.

Inhalation: MOVE TO FRESH AIR.

Ingestion: The product is not considered toxic based on studies on laboratory animals.

V. Fire Fighting Measures

Flash Point: >200°C

Auto Ignition Temperature: >200°C

Lower Explosive Temp.: Not Available

Upper Explosive Temp.: Not available

Extinguishing Media: WATER. WATER SPRAY. FOAM. DRY POWDER. CARBON DIOXIDE (CO2).

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.
Environmental precautions : Do not contaminate water.
Methods for cleaning up : Do not flush with water. Dam up. Soak up with inert absorbent material. If liquid has been spilled 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). When preparing the working solution ensure there is adequate ventilation. 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 but will thicken with decreasing temperature. Product will remain usable down to around -10°F.

VIII. Exposure Controls/Personal Protection

Engineering Controls:	Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists
Respiratory Protection:	In case of insufficient ventilation, wear suitable respiratory equipment
Skin Protection:	Rubber gloves. Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.
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:	Slightly organic	Odor Threshold:	Not Determined
Appearance:	Opalescent viscous liquid	Evaporation Rate:	Not Available
Solubility in H2O:	Not available	Specific Gravity:	1.03
Freeze Point:	not available	pH at 50.0%:	4 - 5 @ 5 g/l for product series.
Vapor Pressure:	Not Available	Viscosity:	Not Available
Physical State:	Viscous Liquid		
Coefficient of Water Oil Distribution:	Not Determined		

X. Stability and Reactivity

Conditions to Avoid:	NI
Incompatibility:	Oxidizing agents may cause exothermic reactions.
Hazardous Decomposition Products:	Thermal decomposition may produce. Carbon oxides (COx). Nitrogen oxides (NOx).
Hazardous Polymization:	Will not occur.
Stability:	Stable under ordinary conditions of use and storage.

XI. Toxicological Properties

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

XII. Ecological Information

Ecological Properties: NI
Ecotoxicity: - Fish LC50/Danio rerio/96 hr > 100 mg/L (OECD 203) (Based on the toxicity of the components using the Conventional Method.)
- Algae : IC50/Scenedesmus subspicatus/72 hr > 100 mg/L (OECD 201)(Based on the toxicity of the components using the Conventional Method.)
- Daphnia : EC50/Daphnia magna/48 hr > 100 mg/L (OECD 202) (Based on the toxicity of the components using the Conventional Method.)
Bioaccumulation : The product is not expected to bioaccumulate.
Persistence / degradability : Not readily biodegradable

Chemical Fate Information: NOT READILY BIODEGRADABLE. DOES NOT HYDROLYSE.

XIII. Disposal Consideration

Disposal Method: In accordance with federal, state and local regulations.

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 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:	This product is not classified as dangerous and need not to be labelled according to EC-Directives as amended.
TSCA Status:	The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.
CERCLA SARA:	None
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.