Schlumberger

SAFETY DATA SHEET

(Canada)

Version: 1 *Revision date:* 18 April 2012

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: **J618**
Product Name: **Water Friction-Reducing Agent J618**

Company identification:
Schlumberger Canada, Ltd.
525 - 3rd Avenue S.W.
Calgary, Alberta T2P 0G4, Canada

Corporate address and telephone number:
Schlumberger Technology Corporation
110 Schlumberger Drive
Sugar Land, Texas 77478, USA
Telephone: 1-281-285-7873

Emergency telephone number: **USA: 1-281-595-3518**

Product use: Fracturing additive in oilfield applications.
PIN: None

SECTION 2. HAZARDS IDENTIFICATION

Form: Liquid **Color:** Off-white Opaque **Odor:** Hydrocarbons

Main physical hazards: No classified physical hazards.
Main health hazards: May be mildly irritating to eyes. Repeated exposure may cause skin dryness or cracking. Swallowing large amounts may be harmful.
Other Information: Contaminated surfaces will be extremely slippery.
Precautions: Avoid contact with the skin and the eyes. Keep away from open flames, hot surfaces and sources of ignition.

Principle routes of exposure:
Eye contact. Skin contact.

WHMIS Hazard Class:
Non-controlled product.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Non-controlled product.

SECTION 4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.
Skin contact: Flush with plenty of water. Wash off with soap and water. Seek medical attention if irritation occurs.
Ingestion: Obtain medical attention. Do not induce vomiting without medical advice. If conscious, drink plenty of water. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person.
Inhalation: Treat symptomatically. Consult a physician if necessary. Move to fresh air.

SECTION 5. FIRE FIGHTING MEASURES

Fire hazard: Combustible material.
Flash point: 100 °C / 212 °F
Autoignition temperature: No data available.
Flammability limits in air:
Lower: No information available.
Upper: No information available.
Oxidizing properties: No data available

Hazardous combustion products:
None

Explosive properties:
Explosion data - sensitivity to mechanical impact:
No information available.
Explosion data - sensitivity to static discharge:
No information available
Suitable extinguishing media:
Water Fog, Alcohol Foam, CO2, Dry Chemical. Fire-fighting equipment on the basis of class B.

Extinguishing media which must not be used for safety reasons:
High volume water jet. Do not use water unless flooding amounts are available.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:
Thermal decomposition can lead to release of irritating gases and vapors.

Special protective equipment for firefighters:
Wear protective fire fighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas.

NFPA:

Health:	**1**
Flammability:	**1**
Instability:	**0**
Special:	**None**

SECTION 6. ACCIDENTAL RELEASE MEASURES

Main physical hazards: No classified physical hazards.
Other Information: Contaminated surfaces will be extremely slippery.
Personal precautions: Avoid contact with skin and eyes. Wear suitable protective equipment.
Methods for cleaning up: Put into suitable containers for disposal. Dam up. Soak up with inert absorbent material.
Environmental precautions: Keep out of waterways.

SECTION 7. HANDLING AND STORAGE

Handling:
Precautions: Avoid contact with the skin and the eyes. Keep away from open flames, hot surfaces and sources of ignition.
Safe handling advice: Keep airborne concentrations below exposure limits. Avoid contact with skin and eyes.
Technical measures/ storage conditions: Store in well ventilated area out of direct sunlight.

SECTION 7. HANDLING AND STORAGE

Packaging requirements: High density polyethylene (HDPE) drum or can.
Incompatible products: Oxidizing agents.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

All chemical Personal Protective Equipment (PPE) should be selected based on an assessment of both the chemical hazard present and the risk of exposure to those hazards. The PPE recommendations below are based on an assessment of the chemical hazards associated with this product. Where this product is used in a mixture with other products or fluids, additional hazards may be created and as such further assessment of risk may be required. The risk of exposure and need of respiratory protection will vary from workplace to workplace and should be assessed by the user in each situation.

Engineering measures to reduce exposure: Control the source by enclosure of the process, or adequate ventilation - local exhaust system, or other applicable.
Hygiene measures: Keep airborne concentrations below exposure limits. Avoid contact with the skin and the eyes.
Respiratory protection: None normally needed.
Eye protection: Tightly fitting safety goggles.
Hand protection: PVC disposable gloves
Skin and body protection: Chemical resistant apron.

Occupational Exposure Limits

ACGIH - TLVs	OSHA - PELs

Additional notes:
- General notes concerning "Particles Not Otherwise Specified" [PNOS] (insoluble or poorly soluble): ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m³, respirable particulate, and 10 mg/m³, inhalable particles.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical characterization: Emulsion.
Form: Liquid
Color: Off-white Opaque
Odor: Hydrocarbons
Odor threshold: No information available.
pH: No information available.
Boiling point/range: 100°C / 212 °F
Bulk density: Not applicable.
Flash point: 100 °C / 212 °F
Melting point/range: No data available.
Decomposition temperature: No data available.
Solubility:
Water solubility: Dispersible.
Fat solubility: No information available.
Partition coefficient (n-octanol/water): Not applicable.
Relative density: 1.06 (@ 15.5°C)
Vapor pressure: 2.5 mm Hg (@ 25°C)
Vapor density: No data available.
Viscosity: No data available.
Evaporation rate: No data available.
% Volatile (VOC): No data available.

SECTION 10. STABILITY AND REACTIVITY

Stability:
Stable under recommended storage conditions

Conditions to avoid:
Keep away from heat and sources of ignition.

Incompatibility with other substances:
Oxidizers.

Hazardous decomposition products:
When heated strongly or burned, oxides of carbon and harmful organic chemical fumes are released.

Hazardous polymerization:
Hazardous polymerization does not occur.

Other Information:
Contaminated surfaces will be extremely slippery.

SECTION 11. TOXICOLOGICAL INFORMATION

Principle routes of exposure:
Eye contact. Skin contact.

PRODUCT TOXICOLOGICAL INFORMATION

Information given is based on data on the components and the toxicology of similar products

Acute Health Hazard

Eye contact:	May be mildly irritating.
Skin contact:	Prolonged skin contact may defat the skin and produce dermatitis.
Ingestion:	Swallowing large amounts may be harmful.
Inhalation:	No effect expected. Prolonged or repeated exposure may cause mild irritation.
Sensitization - lung:	Not known to cause allergic reaction.
Sensitization - skin:	Not known to cause allergic reaction.

Chronic Health Hazard

Carcinogenic effects:	None known.
Mutagenic effects:	Not known to cause heritable genetic damage.
Teratogenic effects:	Not known to cause birth defects or have a deleterious effect on a developing fetus.
Reproductive toxicity:	Not known to adversely affect reproductive functions and organs.
Target organ effects:	None known.

COMPONENT TOXICOLOGICAL INFORMATION

SECTION 12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Main environmental hazards:	Harmful to aquatic organisms.
Aquatic toxicity:	EC50 .25h (Vibrio fischeri) = 16.12 mg/l

Mobility:

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages:
Air = <5% Water = 30 - 50% Soil/Sediment = 50 - 70%

The portion in water is expected to be soluble or dispersible

COMPONENT INFORMATION

SECTION 13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of by injection or other acceptable method in accordance with local regulations.

Contaminated packaging:
Dispose of in accordance with local regulations. If reusable containers are used, send them back to the product supplier, after the required rinsing.

SECTION 14. TRANSPORT INFORMATION

TDG (Canada):

Shipping name: Not regulated.
PIN: None

DOT:

CERCLA RQ: Not established

Proper shipping name: Not regulated

IMDG/IMO

Shipping name: Not regulated.

UN number: None

ICAO/IATA

Shipping name: Not regulated.

UN number: None

Note 1:
For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

SECTION 15. REGULATORY INFORMATION

National Chemical Inventories

Canada, Domestic Substance List (DSL): This product complies with DSL requirements.
USA, Toxic Substances Control Act inventory (TSCA): This product complies with TSCA requirements.

Workplace Hazardous Materials Information System (WHMIS)

This product has been classified according to the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SECTION 16. OTHER INFORMATION

Current references:

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monograms on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Heath and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational safety and Health. Cincinnati, OH.*
5. LOLI Database.

Explanation of terms:

ACGIH: American Conference of Governmental Industrial Hygienist
ACGIH-TL: Threshold Limit Value
DSL: Domestic Substance List
HMIRC: Hazardous Materials Information Review Commission
IARC: International Agency for Research on Cancer
NFPA: National Fire Protection Association
NTP: National Toxicology Program
NIOSH: National Institute of Occupational Safety & Health
NIOSH-REL: Recommended Exposure Limit
OSHA: Occupational Safety & Health Administration
OSHA-PEL: Permissible Exposure Limit
TSCA: Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit;units: [mg/m^3]

ACGIH Notations:
"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.
"A" notation indicates carcinogenicity as follows:
ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.
"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

Section(s) revised: New

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Revision date: 18 April 2012

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End of the Material Safety Data Sheet