

# MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 2

Revision date: 20 September 2010

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product Code:** J609  
**Product Name:** Friction Reducer J609  
**Company Identification:** Schlumberger Technology Corporation  
110 Schlumberger Drive  
Sugar Land, Texas 77478, USA  
Telephone: 1-281-285-7873  
**Emergency Telephone Number:** USA: +1-281-595-3518 (24hr)

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**Main physical hazards:** No classified physical hazards.  
**Main health hazards:** Repeated or prolonged exposure may cause irritation of eyes and skin.  
**Precautions:** Keep away from heat.  
**HMIS classification:** Health: 1 Flammability: 0 Physical hazard: 0

**Form:** Liquid                      **Color:** Opaque Milky White                      **Odor:** Faint Ammonia

**Principle routes of exposure:**  
Skin contact. Eye contact.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %- Range
Ammonium sulfate	7783-20-2	10-30

## 4. FIRST AID MEASURES

**Eye contact:** Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention if irritation occurs.  
**Skin contact:** Wash off with soap and water. Rinse with water. Seek medical attention if irritation occurs.  
**Ingestion:** Do not induce vomiting without medical advice. Call a physician immediately. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person.  
**Inhalation:** Move to fresh air. Consult a physician if necessary.

**5. FIRE-FIGHTING MEASURES**

**Fire hazard:** Negligible.  
**Flash point:** Does not flash.  
**Autoignition temperature:** No data available.  
**Flammability limits in air:**  
    **Lower:** Not applicable  
    **Upper:** Not applicable  
**Oxidizing properties:** None.

**Suitable extinguishing media:**  
Use extinguishing media appropriate for surrounding material.

**Extinguishing media which must not be used for safety reasons:**  
None known

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**  
Heating or fire can release toxic gas.

**Special protective equipment for firefighters:**  
Wear protective fire fighting clothing and avoid breathing vapors.

**NFPA rating:**  
    **Health:** 2  
    **Flammability:** 1  
    **Instability:** 0  
    **Special:** None

**6. ACCIDENTAL RELEASE MEASURES**

**Main physical hazards:** No classified physical hazards.  
**Personal precautions:** Avoid contact with skin and eyes. Wear suitable protective equipment.  
**Methods for cleaning up:** Dam up. Put into suitable containers for disposal.  
**Environmental precautions:** No information available.

**7. HANDLING AND STORAGE**

**Handling:**  
    **Precautions:** Keep away from heat.  
    **Safe handling advice:** Avoid contact with skin and eyes. Wear suitable protective equipment.  
**Technical measures/  
storage conditions:** Keep away from direct sunlight. Avoid freezing. If frozen, mix well after thawing.  
**Packaging requirements:** Steel or high density polyethylene (HDPE) container.  
**Incompatible products:** Oxidizing agents.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering measures  
to reduce exposure:** Control the source.

**Hygiene measures:** Exercise reasonable care and cleanliness.  
**Respiratory protection:** None normally needed.  
**Eye protection:** Tightly fitting safety goggles.  
**Hand protection:** Rubber or plastic gloves.  
**Skin and body protection:** Chemical resistant apron.

### Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / C	STEL	Skin	TWA / C	STEL	Final PELs - Skin
Ammonium sulfate	-	-	-	-	-	-

**Particles Not Otherwise Regulated/Specified [PNOR or PNOS] (insoluble or poorly soluble):**

- OSHA PEL's for Inert or Nuisance Dust are covered by PNOR limits: respirable fraction: 5 mg/m<sup>3</sup>; total dust 15 mg/m<sup>3</sup>.
- ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m<sup>3</sup>, respirable particulate, and 10 mg/m<sup>3</sup>, inhalable particles.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Chemical characterization:** Aqueous solution of organic and inorganic compounds.  
**Fire hazard:** Negligible.  
**Form:** Liquid  
**Color:** Opaque Milky White  
**Odor:** Faint Ammonia  
**Odor threshold:** No information available.  
**pH:** Neutral.  
**Boiling point/range:** No data available.  
**Flash point:** Does not flash.  
**Flammability limits in air:**  
     **Lower:** Not applicable  
     **Upper:** Not applicable  
**Bulk density:** Not applicable.  
**Melting point/range:** No data available.  
**Decomposition temperature:** No data available.  
**Solubility:**  
     **Water solubility:** Completely miscible with water.  
     **Fat solubility:** No information available.  
**Partition coefficient (n-octanol/water):** No information available.  
**Relative density:** 1.26 (@ 24.4°C//76°F)  
**Vapor pressure:** No data available.  
**Vapor density:** No data available.  
**Viscosity:** No data available.  
**Evaporation rate:** No data available.  
**% Volatile (VOC):** None.

## 10. STABILITY AND REACTIVITY

**Stability:**  
 Stable under recommended storage conditions.

**Conditions to avoid:**  
 Extremes of temperature and direct sunlight.

**Incompatibility with other substances:**

Strong acids. Strong bases. Oxidizers.

**Hazardous decomposition products:**

When heated strongly or burned, oxides of carbon, sulfur oxides, nitrogen oxides, ammonia and harmful organic fumes are released.

**Hazardous polymerization:**

Hazardous polymerization does not occur.

**11. TOXICOLOGICAL INFORMATION**

**PRODUCT TOXICOLOGICAL INFORMATION**

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

**Acute Health Hazard**

**Eye contact:** Moderate eye irritation.  
**Skin contact:** Prolonged skin contact may cause skin irritation.  
**Ingestion:** Swallowing large amounts may be harmful.  
**Inhalation:** This is an unlikely route of exposure.  
**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:** None known.  
**Teratogenic effects:** None known.  
**Reproductive toxicity:** None known.  
**Target organ effects:** No information available.

**COMPONENT TOXICOLOGICAL INFORMATION**

Component	Target Organ Effects	LD50 / LC50
Ammonium sulfate	-	= 2000 mg/kg (Oral LD50; Rat)

Component	IARC Group 1 or 2	ACGIH - Carcinogens	OSHA Listed Carcinogens	NTP
Ammonium sulfate	-	-	-	-

**12. ECOLOGICAL INFORMATION**

**PRODUCT INFORMATION**

**Ecotoxicity effects:** Harmful to aquatic organisms.

**COMPONENT INFORMATION**

Ammonium sulfate

<b>Freshwater Fish Species Data</b>	LC50 96 h (Leuciscus idus) = 460 - 1000 mg/L LC50 96 h (Brachydanio rerio) = 250 mg/L LC50 96 h (Brachydanio rerio) = 480 mg/L LC50 96 h (Brachydanio rerio) = 420 mg/L LC50 96 h (Cyprinus carpio) = 18 mg/L LC50 96 h (Pimephales promelas) = >100 mg/L LC50 96 h (Oncorhynchus mykiss) = 32.2-41.9 mg/L LC50 96 h (Oncorhynchus mykiss) = 5.2-8.2 mg/L LC50 96 h (Poecilia reticulata) = 123-128 mg/L LC50 96 h (Poecilia reticulata) = 126 mg/L
<b>Water Flea Data</b>	EC50 24 h (water flea) = 423 mg/L EC50 48 h (Daphnia magna) = 14 mg/L

**13. DISPOSAL CONSIDERATIONS**

**Waste from residues / unused products:**

Dispose of 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.

**EPA RCRA Hazardous Waste Code:**

None

**14. TRANSPORT INFORMATION**

DOT:

<b>CERCLA RQ:</b>	None
<b>Hazard class:</b>	Not regulated.
<b>Proper shipping name:</b>	Not regulated
<b>Label(s):</b>	None required.

IMDG/IMO

<b>Shipping name:</b>	Not regulated.
<b>UN number:</b>	None

ICAO/IATA

<b>Shipping name:</b>	Not regulated.
<b>UN number:</b>	None

TDG (Canada):

<b>Shipping name:</b>	Not regulated.
<b>PIN:</b>	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.*

**15. REGULATORY INFORMATION****International Chemical Inventories**

**USA, Toxic Substances Control Act inventory (TSCA):** This product complies with TSCA requirements.

**IMPORTS, USA:** No import volume restrictions.

**Canada, Domestic Substance List (DSL):** Some components of this material are not on the Canada DSL or exempt.

**IMPORTS, Canada:** Possible import volume restrictions apply. For details contact the Corporate info in SECTION 1.

**U.S.A. Regulations**

**OSHA Hazard Communication Standard:**  
(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

**EPA RCRA Hazardous Waste Code:**  
None

**EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):**

<b>Immediate (Acute) Health Hazard:</b>	None
<b>Delayed (Chronic) Health Hazard:</b>	None
<b>Fire Hazard:</b>	None
<b>Sudden Release or Pressure Hazard:</b>	None
<b>Reactive Hazard:</b>	None

**EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):**  
This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

**Additional Regulatory Information**

Ammonium sulfate

**EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4):** None

**CERCLA/SARA - Hazardous Substances and their RQs:** None

**EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40):** None

**California Proposition 65:** None

**International Hazard Class**

**WHMIS Hazard Class:**  
Non-controlled product.

**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 Monographs 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 Health 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
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<sup>3</sup>]

**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:** 3

**Prepared by:** Chemical Regulatory Compliance (CRC)

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**End of the Material Safety Data Sheet**