

MATERIAL SAFETY DATA SHEET

(USA)

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

Version: 3

Revision date: 15 April 2010

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

Product code: J218
Product name: Breaker J218
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

DANGER

Main physical hazards: Oxidizer.
Main health hazards: May cause allergic reaction upon repeated skin exposure. May cause allergic reaction upon repeated inhalation exposure. Causes eye irritation. Causes skin irritation. Harmful if swallowed.
Other Information: Violent reaction in contact with acids, reducing agents, organic materials, aluminum, copper. May ignite combustible materials in contact with water or moist air. Explosive with dry bromates.
Precautions: Keep away from heat. Ensure adequate ventilation. Avoid contact with the skin and the eyes. Do not breathe dust. Wear suitable protective equipment.
HMIS classification: Health: 3 Flammability: 1 Physical hazard: 2

Form: Granules **Color:** White **Odor:** None
Principle routes of exposure:
Eye contact. Skin contact. Inhalation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %- Range
Diammonium peroxidisulphate	7727-54-0	60 - 100

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.
Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. Seek medical attention if irritation occurs.

Ingestion: DO NOT induce vomiting. Call a physician or Poison Control Center immediately. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air. Consult a physician if necessary.

Additional first aid remarks: Do not attempt to neutralize with basic or halide containing materials. Effects are related to oxidizing properties.

5. FIRE-FIGHTING MEASURES

Fire hazard: This material does not burn, but as an oxidizer it will support combustion of other materials.

Flash point: Does not flash.

Autoignition temperature: Not applicable.

Flammability limits in air:

Lower: Not applicable

Upper: Not applicable

Oxidizing properties: Oxidizer.

Reactivity data: Explosive with dry bromates.

Suitable extinguishing media:
Deluge with water. Other methods not effective.

Extinguishing media which must not be used for safety reasons:
No information available.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:

May ignite combustible materials in contact with water or moist air. Disintegrates slowly at room temperature and rapidly at higher temperatures, releasing oxygen.

Special protective equipment for firefighters:

Wear protective fire fighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas.

NFPA rating:

Health:	3
Flammability:	1
Instability:	2
Special:	Oxidizer

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards: Oxidizer.

Other Information: Violent reaction in contact with acids, reducing agents, organic materials, aluminum, copper. May ignite combustible materials in contact with water or moist air. Explosive with dry bromates.

Personal precautions: Do not get on skin or clothing. Wash thoroughly after handling. Wear suitable protective equipment.

Methods for cleaning up: Scoop into containers. Flush residual with plenty of water. Keep away from organics and combustible materials.

Environmental precautions: No information available.

7. HANDLING AND STORAGE

Handling:

Precautions: Keep away from heat. Ensure adequate ventilation. Avoid contact with the skin and the eyes. Do not breathe dust. Wear suitable protective equipment.

Safe handling advice: Keep airborne concentrations below exposure limits. Provide appropriate exhaust ventilation at places where dust is formed.

Technical measures/ storage conditions: Do not store, transport with or allow to contact dry bromates. Keep material dry. Store in well ventilated area out of direct sunlight. Storage temperature not to exceed 43 °C (110 °F).

Packaging requirements: Bag with moisture barrier.

Incompatible products: Organics. Strong acids. Water. Metals. Do not store, transport with or allow to contact combustible materials, corrosives, reducing agents or dry bromates. Halides. See also Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Control the source. Local exhaust ventilation. Other suitable methods.

Hygiene measures: Wear suitable protective equipment.

Respiratory protection: Use NIOSH approved respirator with dust and mist protection (3M 8210).

Eye protection: Tightly fitting safety goggles.

Hand protection: Impervious gloves. PVC. Rubber gloves.

Skin and body protection: Clean, body-covering clothing. For spills and emergencies, also wear boots and impervious suit.

Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / Ceiling	STEL	ACGIH - Skin	TWA / C	STEL	Final PELs - Skin
Diammonium peroxidisulphate	-	-	-	-	-	-

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/m³; total dust 15 mg/m³.

ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m³, respirable particulate, and 10 mg/m³, inhalable particles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical characterization:	Oxidizer.
Fire hazard:	This material does not burn, but as an oxidizer it will support combustion of other materials.
Form:	Granules
Color:	White
Odor:	None
Odor threshold:	Not applicable.
pH:	4 - 5
pH concentration:	@ 10 g/l
Boiling point/range:	Decomposes
Flash point:	Does not flash.
Flammability limits in air:	
Lower:	Not applicable
Upper:	Not applicable
Bulk density:	1000 kg/m ³
Melting point/range:	Decomposes
Decomposition temperature:	120 °C / 249 °F
Solubility:	
Water solubility:	Soluble.
Fat solubility:	No information available.
Partition coefficient (n-octanol/water):	Not applicable.
Relative density:	2 (@ 20°C)
Vapor pressure:	Not applicable.
Vapor density:	Not applicable.
Viscosity:	Not applicable.
Evaporation rate:	Not applicable.
% Volatile (VOC):	None.

10. STABILITY AND REACTIVITY**Stability:**

May release hydrogen chloride above 120 F (49 C).

Conditions to avoid:

Decomposes with heat.

Incompatibility with other substances:

Acids, moisture, reducing agents, organics, bases, combustible materials, dry bromates. Halides.

Hazardous decomposition products:

Oxygen. Nitrogen Oxides (NOx). Ammonia. Sulfur oxides.

Hazardous polymerization:

Hazardous polymerization does not occur.

Other Information:

Violent reaction in contact with acids, reducing agents, organic materials, aluminum, copper. May ignite combustible materials in contact with water or moist air. Explosive with dry bromates.

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGICAL INFORMATION

Acute Health Hazard

Eye contact:	Irritant. May cause pain, redness, discomfort.
Skin contact:	Irritant; may cause pain, redness, dermatitis.
Ingestion:	Harmful if swallowed; large amounts may cause illness. Irritant; may cause pain or discomfort to mouth, throat and stomach.
Inhalation:	Irritant; may cause pain and coughing.
Sensitization - lung:	May cause allergic reaction upon repeated inhalation exposure.
Sensitization - skin:	May cause sensitization by skin contact.

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:	Skin. Respiratory system.

COMPONENT TOXICOLOGICAL INFORMATION

Component	Target Organ Effects	LD50 / LC50
Diammonium peroxidisulphate	-	= 520 mg/L (Inhalation LC50; Rat) 1 h = 495 mg/kg (Oral LD50; Rat)

Component	IARC Group 1 or 2:	ACGIH - Carcinogens:	OSHA Listed Carcinogens	NTP:
Diammonium peroxidisulphate	-	-	-	-

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION

COMPONENT INFORMATION

Diammonium peroxidisulphate	
Bioaccumulation:	Not applicable
Persistence / degradability:	Not applicable.
Crustacean toxicity:	48h LC50= 21 mg/l (Acartia tonsa)
Freshwater Fish Species Data	LC50 96 h (Lepomis macrochirus) = 103 mg/L LC50 96 h (Oncorhynchus mykiss) = 76.3 mg/L LC50 96 h (Poecilia reticulata) = 323 mg/L
Water Flea Data:	EC50 48 h (Daphnia magna) = 120 mg/L

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

Dispose of in accordance with local regulations. Ship via permitted waste hauler to permitted hazardous waste disposal facility for chemical deactivation and solidification prior to land filling.

Contaminated packaging:

Dispose of in accordance with local regulations.

EPA RCRA Hazardous Waste Code:

D001

14. TRANSPORT INFORMATION

DOT:

UN/NA Number:	UN 1444
CERCLA RQ:	Not established
Hazard class:	5.1
Proper shipping name:	Ammonium persulfate, 5.1, UN 1444, PG III
Label(s):	Oxidizer 5.1

IMDG/IMO

Shipping name:	AMMONIUM PERSULPHATE
Label(s):	Oxidizer 5.1
Class or Div.:	5.1
UN number:	UN 1444
Packing group:	III
EMS:	F-A, S-Q

ICAO/IATA

Shipping name:	Ammonium persulfate	
Label(s):	Oxidizer 5.1	
Class or Div.:	5.1	
UN number:	UN 1444	
Packing group:	III	
Packing instruction (passenger aircraft):	516	Max Net Qty/Pkg: 25 kg
Packing instruction (cargo aircraft):	518	Max Net Qty/Pkg: 100 kg

TDG (Canada):

Shipping name:	AMMONIUM PERSULFATE, 5.1, UN 1444, PG III
Label(s):	Oxidizer 5.1
PIN:	UN 1444
Class:	5.1
Packing group:	III

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): This product complies with DSL requirements.

IMPORTS, Canada: No import volume restrictions.

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:
D001

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

Immediate (Acute) Health Hazard:	YES
Delayed (Chronic) Health Hazard:	None
Fire Hazard:	YES
Sudden Release or Pressure Hazard:	None
Reactive Hazard:	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

Diammonium peroxodisulphate

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:**

C (OXIDIZING MATERIAL)

D2A (Other Toxic Effects - Very Toxic Material)

D2B (Other Toxic Effects - Toxic Material)

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/m³]

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: 2, 5

Prepared by: Chemical Regulatory Compliance (CRC)

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End of the Material Safety Data Sheet