

Safety Data Sheet Breaker J218

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Breaker J218
Product code J218
CAS No 7727-54-0
EC No 231-786-5

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Used as a fracturing additive in oilfield applications

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier

Schlumberger Oilfield Australia Pty Ltd
ABN: 74 002 459 225
ACN: 002 459 225
256 St. Georges Terrace, Perth WA 6000
+47 5157 7424

SDS@slb.com

1.4 Emergency Telephone Number

Emergency telephone - (24 Hour) Australia +61 2801 44558, Asia Pacific +65 3158 1074, China +86 10 5100 3039, Europe +44 (0) 1235 239 670, Middle East and Africa +44 (0) 1235 239 671, New Zealand +64 9929 1483, USA 001 281 595 3518

Croatia	01-23-48-342(for medical information) -Center for Poison
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2. Hazards Identification

2.1 Classification of the substance or mixture

GHS Classification

Health hazards

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity - Single exposure	Category 3

Environmental hazards Not classified

Physical Hazards

Oxidizing Solids	Category 3
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2.2 Label elements**Signal word**

DANGER

Hazard Statements

H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H272 - May intensify fire; oxidizer

Precautionary statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P280 - Wear protective gloves and eye/face protection

Supplementary precautionary statements

P220 - Keep away from clothing and other combustible materials
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing should not be allowed out of the workplace
P285 - In case of inadequate ventilation wear respiratory protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P330 - Rinse mouth
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/ container to an approved waste disposal plant
P410 - Protect from sunlight
P411 + P235 - Store at temperatures not exceeding 38 °C/ 100 °F. Keep cool
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable
P370 + P378 - In case of fire: Use water spray to extinguish

Contains

Diammonium peroxidisulphate

2.3 Other hazards

Not classified as PBT/vPvB by current EU criteria

Do not expose materials or their containers to moisture.

Australian statement of hazardous/dangerous nature

Classified as Hazardous according to the criteria of NOHSC.

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

3. Composition/information on Ingredients

3.1 Substances

Chemical Name	EC No	CAS No	Weight-%
Diammonium peroxodisulphate	231-786-5	7727-54-0	60-100

3.2 Mixtures

Not applicable

4. First Aid Measures

4.1 First aid measures

Inhalation	If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get immediate medical attention.
Ingestion	Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek medical attention.
Eye Contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General advice The severity of the symptoms described will vary dependant of the concentration and the length of exposure. If adverse symptoms develop, the casualty should be transferred to hospital as soon as possible.

Symptoms

Inhalation	Please see Section 11. Toxicological Information for further information.
Ingestion	Please see Section 11. Toxicological Information for further information.
Skin contact	Please see Section 11. Toxicological Information for further information.
Eye contact	Please see Section 11. Toxicological Information for further information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

5. Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Deluge with water. Other methods not effective.

Extinguishing media which must not be used for safety reasons

Dry chemical, carbon dioxide and other gas-filled extinguishers.

5.2. Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

May intensify fire; oxidizer.

Hazardous combustion products

Thermal decomposition can lead to release of irritating gases and vapors Sulfur oxides, Oxygen, Nitrogen oxides (NOx).

5.3 Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Special Fire-Fighting Procedures

Containers close to fire should be removed immediately or cooled with water.

Hazchem code ADG

1Z

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. See also section 8. Do not breathe dust. Avoid contact with the skin and the eyes.

6.2 Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Environmental exposure controls

Avoid release to the environment. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Spilled oxidizer must be removed immediately and isolated for disposal. Isolated material must be monitored for signs of decomposition (fuming/smoking). If spilled material is wet, dissolve with large quantity of water. All disposals must be carried out at the earliest opportunity and in accordance with local /regional /national /international regulations. Take up mechanically and collect in suitable container for disposal. Use non-sparking tools and equipment. After cleaning, flush away traces with water.

6.4 Reference to other sections

See section 13 for more information.

7. Handling and Storage

7.1 Precautions for safe handling

Handling

Do not handle until all safety precautions have been read and understood. Handle in accordance with good industrial hygiene and safety practice. Follow procedures for safe handling of oxidizers. Do not expose materials or their containers to moisture. Keep away from open flames, hot surfaces and sources of ignition. Avoid handling causing generation of dust. Avoid contact with skin and eyes. May produce an allergic reaction.

Hygiene Measures

Wash hands and face before breaks and immediately after handling the product Remove contaminated clothing When using do not smoke, eat or drink.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits.

Storage precautions Oxidizers must be stored separately from all other materials. Keep containers tightly closed in a dry, cool and well-ventilated place Protect from moisture Keep away from direct sunlight. Keep at a temperature not exceeding 110 °F /43 °C Keep away from open flames, hot surfaces and sources of ignition Oxidizing material - Keep away from flammable and combustible materials. Store away from incompatible materials Oxidizing agents Reducing Agents Acids

Storage class Oxidiser storage.

Packaging materials Use specially constructed containers only.

Packaging materials to be avoided Containers made of MONEL, copper, brass, or iron.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Exposure limits Control as an ACGIH particulate not otherwise specified (PNOS): 10 mg/m³ (Inhalable); 3 mg/m³ (Respirable) and an OSHA particulate not otherwise regulated (PNOR): 15 mg/m³ (Total); 5 mg/m³ (Respirable).

Component Information

Chemical Name	Arabic	Australia	Egypt
Diammonium peroxidisulphate	Not determined	Not determined	Not determined
Chemical Name	India	Indonesian	Japan
Diammonium peroxidisulphate	Not determined	0.1 mg/m ³ TWA	Not determined
Chemical Name	Kazakhstan	Kuwait	New Zealand
Diammonium peroxidisulphate	Not determined	Not determined	Not determined
Chemical Name	Malaysia	Philippines	Russia
Diammonium peroxidisulphate	0.1 mg/m ³ TWA	Not determined	Not determined
Chemical Name	Thailand	Vietnam	Turkey
Diammonium peroxidisulphate	Not determined	Not determined	Not determined

Notes

No biological limit allocated

8.2 Exposure controls

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 Controls

Ensure adequate ventilation Mechanical ventilation or local exhaust ventilation is required.

Personal protective equipment

Eye protection

Use eye protection according to EN 166, designed to protect against powders and dusts
Tightly fitting safety goggles

Hand protection

Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training

Do not wear rings, watches or anything similar which can retain the product and may give rise to skin conditions.

Wear protective butyl rubber gloves

Break through time >480 minutes

Glove thickness 2 mm

Frequent change is advisable

Respiratory protection

Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust) Effective dust mask. Half mask with a particle filter P2 (European Norm EN 143 = former DIN 3181) At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

Skin and body protection

Wear appropriate personal protective clothing to prevent skin contact Eye wash and emergency shower must be available at the work place.

Hygiene Measures

Wash hands before breaks and immediately after handling the product Remove and wash contaminated clothing before re-use



8.2.3 Environmental exposure controls

Environmental exposure

Use appropriate containment to avoid environmental contamination See section 6 for more information

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Crystalline
Odor	Odorless
Color	White
Odor threshold	Not applicable

Property	Values	Remarks
pH	Not applicable	
pH @ dilution	4 - 5 @10 g/l	
Melting / freezing point	120 °C / 249 °F	
Boiling point/range	No information available	
Flash point		
Evaporation rate (BuAc =1)	No information available	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit	Not applicable	
Lower flammability limit	Not applicable	
Vapor pressure	No information available	

Vapor density	No information available
Specific gravity	No information available
Bulk density	1000 Kg/m ³
Relative density	1.26 g/cm ³ @ 20°C.
Water solubility	Soluble in water
Solubility in other solvents	No information available
Autoignition temperature	No information available
Decomposition temperature	120 °C / 249 °F
Kinematic viscosity	No information available
Dynamic viscosity	No information available
log Pow	No information available
Explosive properties	Not applicable
Oxidizing properties	Strong oxidizer. Contact with other material may cause fire

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	None
Density	No information available

Comments

The data listed above are typical physical and chemical properties and should not be construed as product specification.

10. Stability and Reactivity

10.1 Reactivity

This product is a strong oxidizer and reacts violently with combustibles and reducing agents.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Avoid contamination. Avoid dust formation. Protect from moisture. Keep away from direct sunlight. Keep at a temperature not exceeding 110 °F /43 °C. Keep away from open flames, hot surfaces and sources of ignition. Oxidizing material - Keep away from flammable and combustible materials.

10.5 Incompatible materials

Do not mix oxidizers of any concentration with other oxidizing agents, reducing agents, flammable or combustible liquids or solids, acids, most metals and heavy metals, oxygen scavengers, corrosion inhibitors, surfactants, gelling agents, fluid-loss additives, cross linkers, solvents, foaming agents, clay control agents, or any chemical not specifically mentioned as being compatible with the specific oxidizer.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological Information

11.1 Information on toxicological effects**Acute toxicity**

Product information	May produce an allergic reaction.
Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause irritation of respiratory tract.
Eye contact	Causes serious eye irritation.
Skin contact	Irritating to skin. May cause an allergic skin reaction.
Ingestion	Harmful if swallowed.
Unknown acute toxicity	Not applicable.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diammonium peroxodisulphate	700-742 mg/kg (Rat)	> 2000 mg/kg (Rat)	No data available

Sensitization	May cause sensitization by inhalation and skin contact.
Mutagenic effects	This substance has no evidence of mutagenic properties.
Carcinogenicity	This substance has no evidence of carcinogenic properties.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards.
Routes of exposure	Inhalation. Skin contact. Eye contact.
Routes of entry	Inhalation. Ingestion. Skin contact.
Specific target organ toxicity - Single exposure	Category 3
Specific target organ toxicity - Repeated exposure	Not classified.
Target organ effects	Respiratory system.
Aspiration hazard	Not applicable.
Other information	Key literature references and sources for data. See Section 16 for more information.

12. Ecological Information**12.1 Toxicity**

The product component(s) are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Toxicity to algae

See component information below.

Toxicity to fish

See component information below.

Toxicity to daphnia and other aquatic invertebrates

See component information below.

Toxicology data for the components

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
Diammonium peroxodisulphate	= 76.3 mg/L LC50 Oncorhynchus mykiss 96 h	= 136 mg/l EC50 Phaenodactylum tricornutum 72h	= 120 mg/L EC50 Daphnia magna 48 h

12.2 Persistence and degradability

No product level data available.

12.3 Bioaccumulative potential

Does not bioaccumulate.

12.4 Mobility**Mobility**

The product is water soluble, and may spread in water systems.

Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects.

None known.

12.7 Other information

Key literature references and sources for data. See Section 16 for more information.

13. Disposal considerations**13.1 Waste treatment methods****Waste from residues/unused products**

Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers. Dispose of contents/container to an approved waste disposal plant.

14. Transport information

14.1. UN number

UN/ID No. (ADR/RID/ADN/ADG)	UN 1444
UN No. (IMDG/ANTAQ)	UN 1444
UN No. (ICAO/ANAC)	UN 1444

14.2. UN proper shipping name

AMMONIUM PERSULFATE,

14.3 Hazard class(es)

ADR/RID/ADN/ADG Hazard class	5.1
IMDG/ANTAQ Hazard class	5.1
ICAO/ANAC Hazard class/division	5.1

14.4 Packing group

ADR/RID/ADN/ADG Packing group	PG III
IMDG/ANTAQ Packing group	PG III
ICAO/ANAC Packing group	PG III



14.5 Environmental hazard

Marine pollutant

No

14.6 Special precautions

Hazard identification no (ADR)	50
EmS (IMDG)	F-A, S-Q
Tunnel restriction code	(E)
Hazchem code ADG	1Z

14.7 Transport in bulk according to Annex I/II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Australian Standard for the Uniform Scheduling of Drugs and Poisons

Diammonium peroxidisulphate
Schedule 6

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)].

National Occupational Health and Safety Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004) 3rd Edition].

National Occupational Health and Safety Commission's Exposure Standards for Atmospheric Contaminants in the occupational Environment [NOHSC:1003 (1995)].

Safe Work Australia.

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

ADG Code – Australian Dangerous Goods Code

International inventories

USA (TSCA)	Complies
Canada (DSL)	Complies
Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Complies
New Zealand (NZIoC)	Complies

16. Other Information

Prepared by Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Ingrid Helland

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Version 5

This SDS has been revised in the following section(s) 2, 15, 16 No changes with regard to classification have been made.

Key literature references and sources for data

www.ChemADVISOR.com

Supplier

National Chemical Inventories

National regulatory information

National occupational exposure limits

HMIS classification

Health	2
Flammability	1
Physical hazard	2
PPE	X

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