

Safety Data Sheet Breaker J218

1. Identification of the substance/preparation and of the Company/undertaking

1.1 Product identifier

Product name Breaker J218
Product code J218
REACH registration number 01-2119495973-19-xxxx

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 identification
Schlumberger Oilfield UK PLC
Victory House, Churchill Court
Manor Royal, Crawley
West Sussex RH10 9LU
+ 47 920 12570
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 001 281 561 1600

Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
-------------	---

2. Hazards Identification

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Health hazards

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitisation	Category 1
Skin sensitisation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Environmental hazards Not classified

Physical Hazards

Oxidizing Solids	Category 3
------------------	------------

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

EU specific hazard statements

EUH208 - Contains (. ?). May produce an allergic reaction

Precautionary Statements - EU (28, 1272/2008)

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray

P280 - Wear protective gloves/protective clothing and eye/face protection

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

P304 + P341 - IF INHALED: If breathing is difficult, remove 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

Supplementary precautionary statements

P221 - Take any precaution to avoid mixing with combustibles

P264 - Wash face, hands and any exposed skin thoroughly after handling

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

P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

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

P405 - Store locked up

P501 - Dispose of contents/container to an approved waste disposal plant

The substance/preparation is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

Indication of danger

O - Oxidizing
Xn - Harmful
Xi - Irritant

R-code(s)

R8, R22, R36/37/38, R42/43

Contains

Diammonium peroxidisulphate

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16.

2.3 Other data

Not classified as PBT/vPvB by current EU criteria

3. Composition/information on Ingredients

3.1 Substances

Component	EC-No.	CAS-No	Weight % - range	Classification (67/548)	Classification (Reg. 1272/2008)	REACH registration number
Diammonium peroxidisulphate	231-786-5	7727-54-0	60-100	O; R8, Xn; R22, Xi; R36/37/38, R42/43	STOT SE 3 (H335) Skin Irrit. 2 (H315) Ox. Sol 3 (H272) Acute Tox. 4 (H302) Skin Sens. 1 (H317) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334)	01-2119495973-19-xxx

3.2 Mixtures

Not Applicable

4. First aid measures

4.1 Description of 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 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.

Main 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

Water spray.

Extinguishing media which shall not be used for safety reasons

Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Precautions against fire and explosion

Oxidising material - Keep away from flammable and combustible materials.

Hazardous combustion products

Heating or fire can release toxic gas.

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.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. See also section 8. Avoid contact with the skin and the eyes. Avoid breathing dust; if exposed to high dust concentration, leave area immediately.

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 materials for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Take up mechanically and collect in suitable container for disposal. 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

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid handling causing generation of dust. Do not breathe dust. May produce an allergic reaction.

Hygiene measures

Use good work and personal hygiene practices to avoid exposure. Wash hands and face before breaks and immediately after handling the product. Remove contaminated clothing. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions	Ensure adequate ventilation. Keep airborne concentrations below exposure limits.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture Keep away from open flames, hot surfaces and sources of ignition Oxidising material - Keep away from flammable and combustible materials. Keep away from direct sunlight Incompatible with strong acids and bases Metal salts Reducing agents
Storage class	Oxidiser storage.
Packaging material	Use specially constructed containers only

7.3 Specific end uses

See also Section 1.2.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Exposure limits NUI = Nuisance dust, WEL TWA 4mg/m³ Respirable Dust, 10mg/m³ Total Dust.

Component	EU OEL - Third List	Austria	Australia	Denmark
Diammonium peroxidisulphate	Not determined	Not determined	Not determined	Not determined
Component	Finland	France	Germany	Hungary
Diammonium peroxidisulphate	Not determined	Not determined	Not determined	Not determined
Component	Ireland	Italy	Netherlands	Norway
Diammonium peroxidisulphate	Not determined	Not determined	Not determined	Not determined
Component	Poland	Portugal	Romania	Russia
Diammonium peroxidisulphate	Not determined	Not determined	Not determined	Not determined
Component	Spain	Switzerland	Turkey	UK
Diammonium peroxidisulphate	0.1 mg/m ³ VLA-ED	Not determined	Not determined	Not determined
Component	ACGIH TLV		TWA / C	
Diammonium peroxidisulphate 7727-54-0 (60-100)	Not Determined		Not Determined	

Derived No Effect Level (DNEL)

Short term exposure local effects

Diammonium peroxidisulphate

Dermal 2.248 mg/cm²

Long term exposure local effects

Diammonium peroxidisulphate

Dermal 0.102 mg/cm²

Inhalation 2.06 mg/m³

Short term exposure systemic effects

Diammonium peroxidisulphate

Dermal 400 mg/kg bw/day

Inhalation 590 mg/m³

Long term exposure systemic effects

Diammonium peroxidisulphate

Dermal 18.2 mg/kg bw/day

Inhalation 2.06 mg/m³

Predicted No Effect Concentration (PNEC) .

Diammonium peroxidisulphate

Fresh Water 0.0763 mg/L

Sea Water 0.011 mg/L

Fresh water sediment 0.275 mg/kg

Sea sediment 0.0396 mg/kg

Soil 0.015 mg/kg

Impact on Sewage Treatment 3.6 mg/L

Intermittent release 0.763 mg/L

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 measures to reduce exposure

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

Personal protective equipment

Eye protection

It is good practice to wear goggles when handling any chemical. Wear dust resistant safety goggles where there is a danger of eye contact.

Hand protection

Polyvinyl alcohol or nitrile-butyl-rubber gloves.

Respiratory protection

Effective dust mask, Half mask with a particle filter P2 (BS EN 143).

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 eating, drinking or smoking, Remove and wash contaminated clothing before re-use.



9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Crystalline
Odour	Odourless
Colour	White
Odor threshold	Not applicable

Property	Values	Remarks
pH	No information available	
pH @ dilution		
Melting/freezing point	120 °C	
Boiling point/range	No information available	
Flash Point	No information available	
Evaporation rate		
Flammability (solid, gas)	Not Applicable	
Flammability Limits 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	No information available	
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	No information available
Kinematic viscosity	
Viscosity, dynamic	No information available
Log Pow	Does not bioaccumulate

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 VALUE	No information available

10. Stability and Reactivity

10.1 Reactivity

H272 - May intensify fire; oxidiser.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerization

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Heat, flames and sparks. S16 - Keep away from sources of ignition - No smoking. Protect from moisture. Avoid dust formation. Avoid strong sunlight.

10.5 Incompatible materials

Incompatible with strong acids and bases. Metal salts. Reducing agents.

10.6 Hazardous decomposition products

See also 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.

Acute toxicity .

Component	LD50 Oral	LD50 Dermal	LD50 Inhalation
Diammonium peroxidisulphate	= 495 mg/kg (Rat)	No data available	= 520 mg/L (Rat) 1 h

Sensitisation 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 None known.

Routes of exposure Inhalation.

Routes of entry No route of entry noted.

Specific target organ toxicity (single exposure) Category 3

Specific target organ toxicity (repeated exposure) Not classified.

Aspiration hazard No hazard from product as supplied.

12. Ecological Information

12.1 Toxicity

Ecotoxicity effects

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.

Component	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
-----------	------------------	-------------------	---

Diammonium peroxidisulphate	323 mg/L LC50 (Poecilia reticulata) = 96 h 76.3 mg/L LC50 (Oncorhynchus mykiss) = 96 h 103 mg/L LC50 (Lepomis macrochirus) = 96 h	No information available	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 in soil

Mobility

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

12.5 Results of PBT and vPvB assessment

Not classified as PBT/vPvB by current EU criteria.

12.6 Other adverse effects.

None known.

13. Disposal Considerations

13.1 Waste treatment methods

Waste from residues / unused products

Dispose of as special waste in compliance with local and national regulations.

Contaminated packaging

If recycling is not practicable, dispose of in compliance with local regulations.

EWC waste disposal No.

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: EWC waste disposal No: Waste Code: 16 03 03 - inorganic wastes containing dangerous substances 16 03 04 - inorganic wastes other than those mentioned in 16 03 03

14. Transport Information

14.1 UN number

UN/ID No. (ADR/RID/ADN/ADG)	UN 1444
UN/ID no	UN 1444
UN No. (ICAO)	UN 1444

14.2 Proper shipping name

AMMONIUM PERSULFATE,

14.3. Hazard class(es)

Hazard class	5.1
IMDG Page	5.1
ICAO = International Civil Aviation Organization	5.1

14.4 Packing group

Packing group	III
Packing group	III
ICAO Packing group	III



14.5 Environmental hazard

Marine pollutant	No
------------------	----

14.6 Special precautions

EmS	F-A, S-Q
-----	----------

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

Please contact SDS@slb.com for info regarding transport in Bulk.

15. Regulatory Information

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

Germany, Water Endangering Classes (VwVwS)	Hazardous to water/Class 1
--	----------------------------

Australian Standard for the Uniform Scheduling of Drugs and Poisons

Diammonium peroxodisulphate
Schedule 6

Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

Dutch Mining Regulations: In accordance with Mining Regulations 9.2 and Chapter 4 of the Working Conditions Decree.

International inventories

USA, Toxic Substances Control Act inventory (TSCA)	Complies
European Union - EINECS and ELINCS	Complies
Canada, Domestic Substance List (DSL)	Complies
Philippines (PICCS)	Complies
Inventory - Japan - Existing and New Chemicals list	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korea (KECL)	Complies
Inventory - New Zealand - Inventory of Chemicals (NZIoC)	Complies

15.2 Chemical Safety Report

No information available

16. Other Information

Prepared by	Global Chemical Regulatory Compliance (GCRC)
Supersedes date	23/Dec/2008
Revision date	15/May/2014
Version	2
The following sections have been revised	SDS fully updated in the new database.

Text of R phrases mentioned in Section 3

R 8 - Contact with combustible material may cause fire.

R22 - Harmful if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

R42/43 - May cause sensitization by inhalation and skin contact

Full text of H-Statements referred to under sections 2 and 3

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

EUH208 - Contains (. ?). May produce an allergic reaction

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.