



Safety Data Sheet J568 Friction Reducing Agent

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

1.1 Product identifier

Product name J568 Friction Reducing Agent
Product code J568

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

Recommended Use Used as a gelling agent 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

Denmark	Poison Control Hotline (DK): +45 82 12 12 12
Germany	+49 69 222 25285
Italy	Centro Antiveleni Ospedale Niguarda Milan: +39 02 6610 1029
Norway	Poison information centre: +47 22 59 13 00

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Health hazards

Serious eye damage/eye irritation	Category 2
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Environmental hazards Not classified

Physical Hazards Not classified

2.2 Label elements



Signal word
WARNING

Hazard statements

H319 - Causes serious eye irritation

Precautionary Statements - EU (§28, 1272/2008)

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

P280 - Wear protective gloves and eye/face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Contains

2-(2-Butoxyethoxy)ethanol

2.3 Other hazards

Not classified as PBT/vPvB by current EU criteria

Australian statement of hazardous/dangerous nature

Classified as Hazardous according to the criteria of NOHSC.

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%	Regulation (EC) No 1272/2008	REACH registration number
2-(2-Butoxyethoxy)ethanol	203-961-6	112-34-5	40 - 70	Eye Irrit. 2 (H319)	01-2119475104-4 4-XXXX

Comments

The product contains other ingredients which do not contribute to the overall classification.

4. First aid measures

4.1 First aid measures

Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Seek medical attention if irritation occurs.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately if symptoms occur.
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 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

Use extinguishing media appropriate for surrounding material.

Extinguishing media which must not be used for safety reasons

High volume water jet.

5.2. Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

None known.

Hazardous combustion products

Fire or high temperatures create: Thermal decomposition can lead to release of irritating gases and vapors.

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.

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. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later 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. Do not breathe vapors or spray mist. Avoid spills and splashing during use.

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 precautions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatibles, Strong oxidizing agents
Storage class	Chemical storage.
Packaging materials	Use specially constructed containers only.

7.3 Specific end uses

See Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters**Exposure limits** No biological limit allocated

Chemical Name	EU OEL	Austria	Australia	Denmark
2-(2-Butoxyethoxy)ethanol	15 ppm STEL 101.2 mg/m ³ STEL 10 ppm TWA 67.5 mg/m ³ TWA	15 ppm STEL 101.2 mg/m ³ STEL 10 ppm TWA 67.5 mg/m ³ TWA	Not determined	100 mg/m ³
Chemical Name	Malaysia	France	Germany	Hungary
2-(2-Butoxyethoxy)ethanol	Not determined	15ppmSTEL 101.2mg/m ³ STEL 10 ppmTWA 67.5 mg/m ³ TWA	67 mg/m ³ TWA 10 ppm TWA	67.5mg/m ³ TWA 101.2mg/m ³ STEL
Chemical Name	New Zealand	Italy	Netherlands	Norway
2-(2-Butoxyethoxy)ethanol	Not determined	Not determined	50 mg/m ³ TWA	10 ppm TWA 68 mg/m ³ TWA 15 ppm STEL 102 mg/m ³ STEL
Chemical Name	Poland	Portugal	Romania	Russia
2-(2-Butoxyethoxy)ethanol	100 mg/m ³ STEL NDsch 67 mg/m ³ TWA NDS	15 ppm STEL VLE-CD 101.2 mg/m ³ STEL VLE-CD 10 ppm TWA indicative limit value 67.5 mg/m ³ TWA indicative limit value	15ppmSTEL 101.2mg/m ³ STEL 67.5mg/m ³ TWA 10ppmTWA	10 mg/m ³ MAC
Chemical Name	Spain	Switzerland	Turkey	UK
2-(2-Butoxyethoxy)ethanol	15 ppm STEL 101.2 mg/m ³ STEL 10 ppm TWA VLA-ED 67.5 mg/m ³ TWA VLA-ED	15 ppm STEL 101 mg/m ³ STEL 10 ppm TWA MAK 67 mg/m ³ TWA MAK	15 ppm STEL 101.2 mg/m ³ STEL 10 ppm TWA 67.5 mg/m ³ TWA	15 ppm STEL 101.2 mg/m ³ STEL 10 ppm TWA 67.5 mg/m ³ TWA

Derived No Effect Level (DNEL)**Short term exposure local effects****2-(2-Butoxyethoxy)ethanol**Inhalation 101.2 mg/m³**Short term exposure systemic effects****2-(2-Butoxyethoxy)ethanol**Inhalation 67.5 mg/m³**Long term exposure systemic effects****2-(2-Butoxyethoxy)ethanol**Dermal 20 mg/kg
Inhalation 67.5 mg/m³**Predicted No Effect Concentration (PNEC)****2-(2-Butoxyethoxy)ethanol**Fresh Water 1.0 mg/L
Sea Water 0.1 mg/L
Freshwater sediment 4 mg/kg
Sea sediment 0.4 mg/kg
Soil 0.4 mg/kg
Impact on sewage treatment 200 mg/L
Intermittent release 3.9 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 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 liquid splashes. Tightly fitting safety goggles. Safety glasses with side-shields.

Hand protection

Use protective gloves made of: Wear gloves according to EN 374 resistant to the solvent(s) in use

Neoprene polyvinyl alcohol or nitrile-butyl rubber gloves

Break through time >480 minutes

Glove thickness ≥ 0.4 mm

Be aware that liquid may penetrate the gloves. Frequent change is advisable.

Respiratory protection

No personal respiratory protective equipment normally required, In case of insufficient ventilation:, When workers are facing concentrations above the exposure limit they must use appropriate certified respirators, Use respirator with organic vapor protection (A, brown), 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 eating, drinking or smoking, 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	Liquid
Appearance	Slurry
Odor	Mild Pleasant
Color	White
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	7	
pH @ dilution		
Melting / freezing point	-65 °C / -85 °F	
Boiling point/range	230 °C / 446 °F	
Flash point	104 °C / 219 °F	Tag Closed Cup
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	<1 kPa	@ 20 °C
Vapor density	No information available	
Specific gravity	~1.1	
Bulk density	No information available	
Relative density	1.06	

Water solubility	Soluble in water
Solubility in other solvents	No information available
Autoignition temperature	228 °C / 442 °F
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	1700 mPa s @ 16 °C
log Pow	No information available

Explosive properties	Not applicable
Oxidizing properties	None known.

9.2 Other information

Pour point	No information available
Molecular weight	No information available
VOC content(%)	50
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

Stable under recommended storage conditions.

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

None known.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation	May cause irritation of respiratory tract.
Eye contact	Causes serious eye irritation.
Skin contact	Prolonged contact may cause redness and irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Unknown acute toxicity Not applicable.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-(2-Butoxyethoxy)ethanol	= 5660 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	No data available

Sensitization This product does not contain any components suspected to be sensitizing.

Mutagenic effects This product does not contain any known or suspected mutagens.

Carcinogenicity This product does not contain any known or suspected carcinogens.

Reproductive toxicity This product does not contain any known or suspected reproductive hazards.

Routes of exposure Eye contact.

Routes of entry Eye contact.

Specific target organ toxicity - Single exposure Not classified

Specific target organ toxicity - Repeated exposure Not classified.

Aspiration hazard Not applicable.

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.

Chemical Name	Toxicity to fish	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates
2-(2-Butoxyethoxy)ethanol	= 1300 mg/L LC50 Lepomis macrochirus 96 h	> 100 mg/L EC50 Desmodesmus subspicatus 96 h	= 2850 mg/L EC50 Daphnia magna 24 h > 100 mg/L EC50 Daphnia magna 48 h

12.2 Persistence and degradability

No product level data available.

Chemical Name	Persistence and degradability
2-(2-Butoxyethoxy)ethanol	Readily biodegradable

112-34-5

12.3 Bioaccumulative potential

No product level data available.

Chemical Name	Bioaccumulation
2-(2-Butoxyethoxy)ethanol 112-34-5	Not likely to 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 in accordance with local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.
EWC Waste Disposal No	According to the European Waste Catalog, 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: 16 03 05 - organic wastes containing dangerous substances 7152 Organic waste without halogen.

14. Transport information**14.1. UN number**

Not regulated

14.2. UN proper shipping name

The product is not covered by international regulation on the transport of dangerous goods

14.3 Hazard class(es)

ADR/RID/ADN/ADG Hazard class	Not regulated
IMDG/ANTAQ Hazard class	Not regulated
ICAO/ANAC Hazard class/division	Not regulated

14.4 Packing group

ADR/RID/ADN/ADG Packing group	Not regulated
IMDG/ANTAQ Packing group	Not regulated
ICAO/ANAC Packing group	Not regulated

14.5 Environmental hazard

No

14.6 Special precautions

Not applicable

14.7 Transport in bulk according to Annex I/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

2-(2-Butoxyethoxy)ethanol
Schedule 5

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.

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).

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

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

International inventories

USA (TSCA)	Complies
European Union (EINECS and ELINCS)	Complies
Canada (DSL)	Complies

Philippines (PICCS)	Complies
Japan (ENCS)	Complies
China (IECSC)	Complies
Australia (AICS)	Complies
Korean (KECL)	Does not comply
New Zealand (NZIoC)	Complies

Europe - REACH

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Norway Pr. no.	53888
Denmark Pr. no:	166583

15.2 Chemical Safety Report

No information available

16. Other information

Prepared by	Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Ingrid Helland
Supersedes date	11-Aug-2016
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Version	5
This SDS has been revised in the following section(s)	1, 2, 5, 8, 15, 16. Updated according to GHS/CLP.

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

H319 - Causes serious eye irritation

Disclaimer

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