SDS no. J589
Version 3
Revision date 18-Oct-2017
Supersedes date 26-Jun-2017

Safety Data Sheet
Rheology Modifier J589

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

1.1 Product identifier

Product name Rheology Modifier J589
Product code J589

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

Recommended Use Rheology modifier.

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

Italy	Centro Antiveleni Ospedale Niguarda Milan: +39 02 6610 1029
Norway	Poison information centre: +47 22 59 13 00
Malaysian	Local emergency number; +603 2161 7655

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
Specific target organ toxicity - Single exposure	Category 3

Environmental hazards Not classified

Physical Hazards

Flammable Liquids	Category 3

2.2 Label elements

Signal word
WARNING

Hazard statements
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)
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
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Supplementary precautionary statements
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment
P242 - Use non-sparking tools
P243 - Take precautionary measures against static discharge
P264 - Wash face, hands and any exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing and eye/face protection
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P378 - Use extinguishing powder for extinction
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P403 + P235 - Store in a well-ventilated place. Keep cool

Contains
Propan-2-ol

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. 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
Propan-2-ol	200-661-7	67-63-0	10-30	Flam. Liq. 2, (H225) STOT SE 3 (H336) Eye Irrit. 2 (H319)	01-2120063207-61-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 if irritation persists.

Eye Contact Promptly wash eyes with lots of water while lifting eye lids. Remove contact lenses, if worn. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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
Dry chemical, CO2, water spray or alcohol-resistant foam.

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
FLAMMABLE LIQUID AND VAPOR. Vapors may travel to source of ignition and flash back.

Hazardous combustion products
Fire or high temperatures create: Carbon oxides (COx), Harmful organic chemical fumes.

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
•3Y

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Remove all sources of ignition. 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
Take precautionary measures against static discharges. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Use clean non-sparking tools to collect absorbed material. Ground and bond containers when transferring material. 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. When using do not smoke, eat or drink. Wash hands and face before breaks and immediately after handling the product Remove contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/precautions Ensure adequate ventilation. Keep airborne concentrations below exposure limits. Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep away from direct sunlight. Avoid contact with: Strong acids. Strong bases Strong oxidizing agents Strong reducing agents.

Storage class Flammable liquid 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

Component Information

Chemical Name	EU OEL	Austria	Australia	Denmark
Propan-2-ol	Not determined	800 ppm STEL 2000 mg/m³ STEL 200 ppm TWA 500 mg/m³ TWA	500ppmSTEL 1230mg/m³STEL 400ppmTWA 983mg/m³TWA	200 ppm 490 mg/m³
Chemical Name	**Malaysia**	**France**	**Germany**	**Hungary**
Propan-2-ol	400 ppm TWA 983 mg/m³ TWA	400ppmSTEL 980mg/m³STEL	200 ppm TWA 500 mg/m³ TWA	500mg/m³TWA 2000mg/m³STEL
Chemical Name	**New Zealand**	**Italy**	**Netherlands**	**Norway**
Propan-2-ol	500 ppm STEL 1230 mg/m³ STEL 400 ppm TWA 983 mg/m³ TWA	Not determined	Not determined	100 ppm TWA 245 mg/m³ TWA 125 ppm STEL 306.25 mg/m³ STEL
Chemical Name	**Poland**	**Portugal**	**Romania**	**Russia**
Propan-2-ol	1200 mg/m³ STEL NDSCh 900 mg/m³ TWA NDS	400 ppm STEL VLE-CD 200 ppm TWA	203ppmSTEL 500mg/m³STEL 81ppmTWA 200mg/m³TWA	50 mg/m³ STEL 1721 vapor 10 mg/m³ TWA 1721
Chemical Name	**Spain**	**Switzerland**	**Turkey**	**UK**
Propan-2-ol	400 ppm STEL 1000 mg/m³ STEL 200 ppm TWA VLA-ED 500 mg/m³ TWA VLA-ED	400 ppm STEL 1000 mg/m³ STEL 200 ppm TWA MAK 500 mg/m³ TWA MAK	Not determined	500 ppm STEL 1250 mg/m³ STEL 400 ppm TWA 999 mg/m³ TWA

Derived No Effect Level (DNEL)

Long term exposure systemic effects
Propan-2-ol

Dermal	888 mg/kg bw/day
Inhalation	500 mg/m³

Predicted No Effect Concentration (PNEC)
Propan-2-ol

Fresh Water	140.9 mg/L
Sea Water	140.9 mg/L
Freshwater sediment	552 mg/kg sediment dw
Sea sediment	552 mg/kg sediment dw
Soil	28 mg/kg soil dw
Impact on sewage treatment	2 251 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. Keep airborne concentrations below exposure limits.

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	Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Impervious gloves Nitrile Butyl Rubber Break through time >480 minutes Glove thickness >0.35 mm Be aware that liquid may penetrate the gloves. Frequent change is advisable.
Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment, 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 suitable protective clothing, 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Aqueous solution
Odor	Alcohol
Color	Colorless
Odor threshold	Not applicable

Property	Values	Remarks
pH	5.5 - 8.5	
pH @ dilution		
Melting / freezing point	- 15 °C / 5 °F	
Boiling point/range	No information available	
Flash point	25 °C / 77 °F	
Evaporation rate (BuAc =1)	< 1	

Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit	36%	
Lower flammability limit	2.5%	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	0.96 - 0.98 g/cm³	25 °C
Bulk density	No information available	
Relative density	No information available	
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
log Pow	No information available	

Explosive properties	No information available
Oxidizing properties	No information available

9.2 Other information

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

Flammable liquid and vapor.

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

Keep away from direct sunlight. Take precautionary measures against static charges. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Strong reducing agents.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation May cause drowsiness or dizziness. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eye contact Causes serious eye irritation.

Skin contact Prolonged contact may cause redness and irritation.

Ingestion Ingestion may cause stomach discomfort.

Unknown acute toxicity Not applicable.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Propan-2-ol	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m³ (Rat) 4 h

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 Inhalation. Skin contact. Eye contact.

Routes of entry Inhalation. Skin contact. Eye contact.

Specific target organ toxicity - Single exposure Category 3

Specific target organ toxicity - Repeated exposure Not classified.

Target organ effects Central nervous system.

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
Propan-2-ol	> 1400000 µg/L LC50 Lepomis macrochirus 96 h = 11130 mg/L LC50 Pimephales promelas 96 h = 9640 mg/L LC50 Pimephales promelas 96 h	> 1000 mg/L EC50 Desmodesmus subspicatus 96 h > 1000 mg/L EC50 Desmodesmus subspicatus 72 h	= 13299 mg/L EC50 Daphnia magna 48 h

12.2 Persistence and degradability

See component information below.

Chemical Name	Persistence and degradability
Propan-2-ol 67-63-0	Readily biodegradable

12.3 Bioaccumulative potential

See component information below.

Chemical Name	Bioaccumulation
Propan-2-ol 67-63-0	No bioaccumulation potential

12.4 Mobility in soil

Mobility
Soluble in water.

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 05 08 16 10 01 - aqueous liquid wastes containing dangerous

substances 7152 Organic waste without halogen.

14. Transport information

14.1. UN number

UN/ID No. (ADR/RID/ADN/ADG)	UN1993
UN No. (IMDG/ANTAQ)	UN1993
UN No. (ICAO/ANAC)	UN1993

14.2. UN proper shipping name
FLAMMABLE LIQUID, N.O.S. (propan-2-ol)

14.3 Hazard class(es)

ADR/RID/ADN/ADG Hazard class	3
IMDG/ANTAQ Hazard class	3
ICAO/ANAC Hazard class/division	3

14.4 Packing group

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

14.5 Environmental hazard
No

14.6 Special precautions

Hazard identification no (ADR)	30
EmS (IMDG)	F-E, S-E
Emergency Action Code (EAC)	•3Y
Tunnel restriction code	(D/E)
Hazchem code ADG	•3Y

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

Australian Standard for the Uniform Scheduling of Drugs and Poisons
No poisons schedule number allocated

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).

ADG Code – Australian Dangerous Goods Code.

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013 [P.U.(A) 310/2013] (CLASS Regulations)

The Industry Code of Practice on Chemical Classification and Hazard Communication 2014 [P.U. (B) 128/2014] (ICOP)

International inventories

USA (TSCA)	Complies
European Union (EINECS and ELINCS)	Complies
Canada (DSL)	Does not comply
Philippines (PICCS)	Does not comply
Japan (ENCS)	Does not comply
China (IECSC)	Does not comply
Australia (AICS)	Complies
Korean (KECL)	Does not comply
New Zealand (NZIoC)	Does not comply

Europe - REACH
All products supplied from the European Economic Area (EEA) are compliant with the REACH Regulation EC 1907/2006.For products supplied from the EEA, Schlumberger and/or its suppliers have pre-registered and is registering all of the substances that it and/or its suppliers manufactures in or imports into the EEA that are subject to Title II of the REACH Regulation. All products supplied from outside the EEA are subject to REACH only if imported into the EEA. The importer of the products must comply with REACH for each imported substance. Contact REACH@slb.com for REACH information.

15.2 Chemical Safety Report

No information available

16. Other information

Prepared by	Global Regulatory Compliance - Chemicals (GRC - Chemicals) , Muriel Martin Beurel
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Version	3
This SDS has been revised in the following section(s)	14, No changes with regard to classification have been made.

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

H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H226 - Flammable liquid and vapor

Disclaimer
The information contained herein is considered in good faith as reliable of the date issued and is based upon on measurements, tests or data derived from supplier's own study or furnished by others. In providing this SDS information, Supplier makes no express or implied warranties as to the information or product; merchantability or fitness of purpose; any express or implied warranty; or non-infringement of intellectual property rights; and supplier assumes no responsibility for any direct, special or consequential damages, results obtained, or the activities of others. To the maximum extent permitted by law, supplier's warranty obligations and buyer's sole remedies are as stated in separate agreement between the parties.