

Safety data sheet number B297

Version 1

Revision date 03/Apr/2014

Supersedes date None



Safety Data Sheet Corrosion Inhibitor B297

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

1.1 Product identifier

Product name Corrosion Inhibitor B297
Product code B297

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

Recommended use Used as a corrosion inhibitor in oilfield applications

Uses advised against None known.

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)
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2. Hazards Identification

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Health hazards

Skin corrosion/irritation	Category 1 Subcategory 1B
Serious eye damage/eye irritation	Category 1

Environmental hazards

Chronic aquatic toxicity	Category 3
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Physical Hazards

Flammable Liquids	Category 3
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2.2 Label Elements



Signal word
DANGER

Hazard statements

H314 - Causes severe skin burns and eye damage
H412 - Harmful to aquatic life with long lasting effects
H226 - Flammable liquid and vapor

Precautionary Statements - EU (28, 1272/2008)

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 - Wear protective gloves/protective clothing and eye/face protection
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
P315 - Get immediate medical advice/ attention
P370 + P378 - In case of fire: Use dry powder, foam and carbon dioxide for extinction

Supplementary precautionary statements

P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 - Wash contaminated clothing 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

Contains

Acetic acid

Thiourea/formaldehyde polymer

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For the full text of the 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

Not Applicable

3.2 Mixtures

Component	EC-No.	CAS-No	Weight % - range	Classification (67/548)	Classification (Reg. 1272/2008)	REACH registration number
Acetic acid	200-580-7	64-19-7	30 - 60	R10 C; R35	Skin Corr. 1A (H314) Flam. Liq. 3 (H226)	No data available
Thiourea/formaldehyde polymer	Polymer	68527-49-1	10 - 30	Xn; R22, Xi; R41, N; R51/53	Acute Tox. 4 (H302), Eye Dam. 1 (H318), Aquatic Chronic. 2 (H411)	No data available

Comment

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

4. First aid measures

4.1 Description of first-aid measures

Inhalation	Keep at rest. Move the exposed person to fresh air at once. If breathing is difficult, (trained personnel should) give oxygen. Seek medical attention at once.
Ingestion	Do NOT induce vomiting. Rinse mouth. Risk of product entering the lungs on vomiting after ingestion. Never give anything by mouth to an unconscious person. Immediate medical attention is required.
Skin contact	Get immediate medical attention. Promptly wash contaminated skin with soap or mild detergent and water. Promptly remove clothing if soaked through and wash as above. Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns must be treated by a physician.
Eye contact	Get immediate medical attention. 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.

4.2 Most important symptoms and effects, both acute and delayed

General advice	Seek medical attention for all burns, regardless how minor they may seem. 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

Use CO₂, dry chemical, or foam.

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

flammable liquid.

Hazardous combustion products

Fire or high temperatures create: Carbon oxides (CO_x), Oxides of phosphorus, Sulphur oxides.

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

•3W

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist. 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 materials 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

Ground and bond containers when transferring material. Use clean non-sparking tools to collect absorbed material. Use a non-combustable material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

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, eyes and clothing. Avoid spills and splashing during use. Do not breathe vapors or spray mist.

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. Provide mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into work environment. Keep airborne concentrations below exposure limits. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Store away from incompatibles, Strong oxidising agents

Storage class

Flammable liquid 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

Component	EU OEL - Third List	Austria	Australia	Denmark
Acetic acid	Not determined	Not determined	10 ppm TWA; 25 mg/m ³ TWA 15 ppm STEL; 37 mg/m ³ STEL	10 ppm 25 mg/m ³
Thiourea/formaldehyde polymer	Not determined	Not determined	Not determined	Not determined

Component	Finland	France	Germany	Hungary
Acetic acid	Not determined	Not determined	Not determined	Not determined
Thiourea/formaldehyde polymer	Not determined	Not determined	Not determined	Not determined

Component	Ireland	Italy	Netherlands	Norway
Acetic acid	Not determined	Not determined	Not determined	10 ppm 25 mg/m ³
Thiourea/formaldehyde polymer	Not determined	Not determined	Not determined	Not determined

Component	Poland	Portugal	Romania	Russia
Acetic acid	30 mg/m ³ STEL 15 mg/m ³ TWA	15 ppm STEL 10 ppm TWA	Not determined	Skin
Thiourea/formaldehyde polymer	Not determined	Not determined	Not determined	Not determined

Component	Spain	Switzerland	Turkey	UK
Acetic acid	15 ppm VLA-EC 37 mg/m ³ VLA-EC 10 ppm VLA-ED 25 mg/m ³ VLA-ED	20 ppm STEL 50 mg/m ³ STEL 10 ppm MAK 25 mg/m ³ MAK	10 ppm TWA 25 mg/m ³ TWA	Not determined
Thiourea/formaldehyde polymer	Not determined	Not determined	Not determined	Not determined

Component	ACGIH TLV	TWA / C
Acetic acid	10 ppm	10 ppm TWA 25 mg/m ³ TWA
Thiourea/formaldehyde polymer	Not Determined	Not Determined

Derived No Effect Level (DNEL)

Short term exposure local effects

Acetic acid

Inhalation 25 mg/m³

Long term exposure local effects

Acetic acid

Inhalation 25 mg/m³

Predicted No Effect Concentration (PNEC)

Acetic acid

Fresh Water 3.058 mg/L
Sea Water 0.3058 mg/L
Fresh water sediment 11.36 mg/kg
Sea sediment 1.136 mg/kg
Soil 0.47 mg/kg
Impact on Sewage Treatment 85 mg/L
Intermittent release 30.58 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. Provide mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into work environment.

Personal protective equipment

Eye protection	It is good practice to wear goggles when handling any chemical. Chemical splash goggles and face shield.
Hand protection	Wear chemical resistant gloves such as nitrile or neoprene, Be aware that liquid may penetrate the gloves. Frequent change is advisable.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations, At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used, Use NIOSH approved respirator with organic vapor/acid gas protection (color coded yellow).
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	Liquid
Appearance	transparent
Odour	pungent
Colour	clear Light amber
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	3 - 4	(@ 5% w/w)
pH regulating agent		
Melting/freezing point	< 0 °C	
Boiling point/range	No information available	
Flash Point	57 °C	PMCC
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	1.1	@ 20°C.
Water solubility	Soluble in water	
Solubility in other solvents	No information available	
Autoignition temperature	Not Applicable	
Decomposition temperature	No information available	
Kinematic viscosity	< 100 cSt @ 20 °C	

Viscosity, dynamic
Log Pow

No information available
-0.17

Explosive properties
Oxidizing properties

Not Applicable
None known.

9.2 Other information

Pour point
Molecular weight
VOC content(%)
Density VALUE

No information available
No information available
None
No information available

10. Stability and Reactivity

10.1 Reactivity

FLAMMABLE LIQUID AND vapour.

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

Keep away from direct sunlight. S16 - Keep away from sources of ignition - No smoking. Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

See also section 5.2.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Product information

Causes severe skin burns and eye damage.

Inhalation

Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic oedema of the lungs.

Eye contact

Causes burns. Corrosive to the eyes and may cause severe damage including blindness.

Skin contact

Corrosive. Causes burns. May be absorbed through the skin in harmful amounts.

Ingestion Causes burns. Can burn mouth, throat, and stomach.

Acute toxicity .

Component	LD50 Oral	LD50 Dermal	LD50 Inhalation
Acetic acid	= 3310 mg/kg (Rat)	= 1060 mg/kg (Rabbit)	= 11.4 mg/L (Rat) 4 h
Thiourea/formaldehyde polymer	No data available	No data available	No data available

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

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 Skin contact. Eye contact. Inhalation.

Routes of entry Skin. Eye contact.

Specific target organ toxicity (single exposure) Not classified

Specific target organ toxicity (repeated exposure) Not classified.

Aspiration hazard No hazard from product as supplied.

12. Ecological Information

12.1 Toxicity

Ecotoxicity effects

Harmful to aquatic life with long lasting effects.

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
Acetic acid 64-19-7 (30 - 60)	75 mg/L LC50 (Lepomis macrochirus) = 96 h 79 mg/L LC50 (Pimephales promelas) = 96 h	300.82 mg/l EC50 (Algae) = 72h 73,400 µg/l EC50 (Algae - Navicula seminulum) = 96h	47 mg/L EC50 (Daphnia magna) = 24 h 65 mg/L EC50 (Daphnia magna) = 48 h

Thiourea/formaldehyde polymer 68527-49-1 (10 - 30)	No information available	No information available	No information available
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12.2 Persistence and degradability

No product level data available.

12.3 Bioaccumulative potential

Product has a low potential to bioconcentrate.

Log Pow
-0.17

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 the European Directives on waste and hazardous waste.
Contaminated packaging	Empty containers may contain flammable or explosive vapors. 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: 07 01 01

14. Transport Information

14.1 UN number

UN/ID No. (ADR/RID/ADN/ADG)	UN 2924
UN/ID no	UN 2924
UN No. (ICAO)	UN 2924

14.2 Proper shipping name

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (contains acetic acid),

14.3. Hazard class(es)

Hazard class	3 (8)
IMDG Page	3 (8)
ICAO = International Civil Aviation Organization	3 (8)

14.4 Packing group

Packing group	III
Packing group	III
ICAO Packing group	III



14.5 Environmental hazard

Marine pollutant	No
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14.6 Special precautions

EmS	F-E, S-C
Emergency action code	•3W
Hazchem code ADG	•3W

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

Australian Standard for the Uniform Scheduling of Drugs and Poisons

Acetic acid
Schedule 6
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.

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)	Does not Comply
Inventory - Japan - Existing and New Chemicals list	Does not Comply
China (IECSC)	Does not Comply
Australia (AICS)	Does not Comply
Korea (KECL)	Complies
Inventory - New Zealand - Inventory of Chemicals (NZIoC)	Does not Comply

U.S. Federal and State Regulations

Component	SARA 302 / TPQs	SARA 313	CERCLA RQ
Acetic acid	N/A	N/A	5000 lb final RQ 2270 kg final RQ
Thiourea/formaldehyde polymer	N/A	N/A	N/A

15.2 Chemical Safety Report

No information available

16. Other Information

Prepared by	Global Chemical Regulatory Compliance (GCRC)
Revision date	03/Apr/2014
Version	1

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

H314 - Causes severe skin burns and eye damage
H412 - Harmful to aquatic life with long lasting effects
H226 - Flammable liquid and vapor
H302 - Harmful if swallowed
H318 - Causes serious eye damage
H411 - Toxic to aquatic life with long lasting effects

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.