

Safety data sheet number H015
Version 3
Revision date 31/Mar/2017
Supercedes date 19/Apr/2016



Safety Data Sheet Hydrochloric Acid 15% H15

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

1.1 Product identifier

Product name Hydrochloric Acid 15% H15
Product code H015
Norway Pr. no. 17101
Denmark Pr. no. 1088965

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

Recommended Use Used as an acidizing additive in oilfield applications

Uses advised against Consumer use

1.3 Details of the supplier of the safety data sheet

Supplier

Schlumberger Oilfield UK PLC
Victory House, Churchill Court
Manor Royal, Crawley
West Sussex RH10 9LU
+ 47 51577424

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

Skin corrosion/irritation	Category 1 Subcategory 1B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity - Single exposure	Category 3

Environmental hazards Not classified

Physical Hazards

Substances/mixtures corrosive to metal	Category 1
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2.2 Label elements



Signal word

DANGER

Hazard statements

H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

H290 - May be corrosive to metals

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

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

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

P310 - Immediately call a POISON CENTER or doctor/ physician

P406 - Store in corrosive resistant/ . container with a resistant inner liner

Supplementary precautionary statements

P234 - Keep only in original container

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

P271 - Use only outdoors or in a well-ventilated area

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P362 - Take off contaminated clothing and wash before reuse

P390 - Absorb spillage to prevent material damage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P501 - Dispose of contents/container in accordance with local regulations.

Contains

Hydrochloric acid

2.3 Other hazards

Not classified as PBT/vPvB by current EU criteria

3. Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical Name	EC No	CAS No	Weight-%	Classification according to 67/548/EEC	Regulation (EC) No 1272/2008	REACH registration number
Hydrochloric acid	231-595-7	7647-01-0	15	-	Skin Corr. 1A (H314) STOT SE 3 (H335) Met. Corr.1 (H290) Note B	01-2119484862-27-x xxx

Comments

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

Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations.

4. First aid measures

4.1 First Aid

Inhalation	Move the exposed person to fresh air at once. If breathing is difficult, (trained personnel should) give oxygen. If not breathing, give artificial respiration. Seek medical attention at once.
Ingestion	Do NOT induce vomiting. Get immediate medical attention. Rinse mouth. Risk of product entering the lungs on vomiting after ingestion. Never give anything by mouth to an unconscious person.
Skin contact	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	Remove contact lenses. Immediately flush eyes with water for 15 minutes while holding eyelids open. Immediate medical attention is required.

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

The product itself does not burn, Use extinguishing media appropriate for surrounding material.

Extinguishing media which must not be used for safety reasons

None known.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards

Contact with metals may evolve flammable hydrogen gas.

Hazardous combustion products

Fire or high temperatures create: Chlorine, chlorine oxides, hydrogen chloride.

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

Do not get on skin or clothing. Wash thoroughly after handling. Do not breathe vapours 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 material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Dyke far ahead of liquid spill for later disposal.

Methods for cleaning up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

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 Do not eat, drink or smoke when using this product 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 Use only in area provided with appropriate exhaust ventilation. Keep airborne concentrations below exposure limits. Keep away from heat.

Storage precautions Keep containers tightly closed in a dry, cool and well-ventilated place Avoid excessive heat for prolonged periods of time. Store away from incompatibles, Strong oxidising agents Alkalis Metals

Storage class Corrosive 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

Chemical Name	EU OEL - Third List	Austria	Australia	Denmark
Hydrochloric acid	10 ppm STEL 15 mg/m ³ STEL 5 ppm TWA 8 mg/m ³ TWA	10 ppm STEL 15 mg/m ³ STEL 5 ppm TWA 8 mg/m ³ TWA	Not determined	5 ppm Ceiling 8 mg/m ³ Ceiling
Chemical Name	Malaysia	France	Germany	Hungary
Hydrochloric acid	5 ppm Ceiling 7.5 mg/m ³ Ceiling	5ppmSTEL 7.6mg/m ³ STEL	2 ppm TWA 3.0 mg/m ³ TWA	8mg/m ³ TWA 16mg/m ³ STEL
Chemical Name	New Zealand	Italy	Netherlands	Norway
Hydrochloric acid	5 ppm Ceiling 7.5 mg/m ³ Ceiling	Not determined	8 mg/m ³ GW	5 ppm Ceiling; 7 mg/m ³ Ceiling
Chemical Name	Poland	Portugal	Romania	Russia
Hydrochloric acid	10 mg/m ³ STEL NDsch	10 ppm STEL VLE-CD	10ppmSTEL	Acute dangerous

	5 mg/m ³ TWA NDS	15 mg/m ³ STEL VLE-CD 5 ppm TWA indicative limit value 8 mg/m ³ TWA indicative limit value	15mg/m ³ STEL 5ppmTWA 8mg/m ³ TWA	substance 5 mg/m ³ MAC
Chemical Name	Spain	Switzerland	Turkey	UK
Hydrochloric acid	10 ppm STEL 15 mg/m ³ STEL 5 ppm TWA VLA-ED 7.6 mg/m ³ TWA VLA-ED	4 ppm STEL 6 mg/m ³ STEL 2 ppm TWA MAK 3.0 mg/m ³ TWA MAK	10 ppm STEL 15 mg/m ³ STEL 5 ppm TWA 8 mg/m ³ TWA	5 ppm STEL aerosol mist and gas 8 mg/m ³ STEL aerosol mist and gas 1 ppm TWA aerosol mist and gas 2 mg/m ³ TWA aerosol mist and gas

Derived No Effect Level (DNEL)

Short term exposure local effects

Hydrochloric acid

Inhalation 15 mg/m³

Long term exposure local effects

Hydrochloric acid

Inhalation 8 mg/m³

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

Hand protection

Eye protection must conform to standard EN 166. Chemical splash goggles and face shield.
Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training

Use protective gloves made of: Butyl Rubber Nitrile Viton

Break through time >480 minutes

Glove thickness 0.5 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 wear suitable respiratory equipment, Respirator with combination filter for vapour/particulate (EN 141), Type E/P2, 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 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	Aqueous solution
Odour	Pungent
Colour	Colourless
Odour threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>
pH	< 2	
pH @ dilution		
Melting / freezing point	< 0 °C / 32 °F	
Boiling point/range	~100 °C / 212 °F	
Flash point	Not applicable	
Evaporation rate	No information available	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit	Not applicable	
Lower flammability limit	Not applicable	
Vapour pressure	31.33 hPa (@ 20°C)	
Vapour density	1.267	
Specific gravity	1.1	@ 16 °C
Bulk density	No information available	
Relative density	1.161 - 1.19 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	No information available	
Dynamic viscosity	1 mPa.s (@ 20 °C)	
log Pow	Not determined	
Explosive properties	Not applicable	
Oxidising properties	None known	

9.2 Other information

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

10. Stability and reactivity

10.1 Reactivity

Corrosive. Corrosive to Metals. Contact with metals may evolve flammable hydrogen gas.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of Hazardous Reactions

Hazardous polymerisation

Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5 Incompatible materials

Strong oxidising agents. Alkalis. Metals.

10.6 Hazardous decomposition products

See Section 5.2.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Inhalation

Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema. Vapours irritate the respiratory system, and may cause coughing and difficulties in breathing.

Eye contact

Causes serious eye damage.

Skin contact

Causes severe skin burns.

Ingestion

Ingestion causes burns of the upper digestive and respiratory tracts.

Unknown acute toxicity

Not applicable.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h

Sensitisation

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	Respiratory 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. Large amounts will affect pH and harm aquatic organisms

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
Hydrochloric acid	= 282 mg/L LC50 Gambusia affinis 96 h	No information available	No information available

12.2 Persistence and degradability

Not Applicable - Inorganic chemical.

12.3 Bioaccumulative potential

Not Applicable - Inorganic chemical.

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 as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Empty containers should be transported/delivered using a registered waste carrier for local recycling or waste disposal.
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: 7131 Inorganic Acids 16 03 03 - inorganic wastes containing dangerous substances

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

UN/ID No. (ADR/RID/ADN/ADG)	UN 1789
UN No. (IMDG)	UN 1789
UN No. (ICAO)	UN 1789

14.2. UN proper shipping name

HYDROCHLORIC ACID SOLUTION 15%

14.3. Hazard class(es)

ADR/RID/ADN/ADG Hazard class	8
IMDG Hazard class	8
ICAO Hazard class/division	8

14.4 Packing group

ADR/RID/ADN/ADG Packing Group	III
IMDG Packing group	III

ICAO Packing group

III



14.5 Environmental hazard

No

14.6 Special precautions

Hazard ID	80
EmS (IMDG)	F-A, S-B
Emergency Action Code (EAC)	2R
Tunnel restriction code	(E)

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

Hydrochloric 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 (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 Regulatory Compliance - Chemicals (GRC - Chemicals) , Muriel Martin Beurel
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This SDS has been revised in the following section(s)	All sections There have been changes with regard to classification.

Text of R phrases mentioned in Section 3

R34 - Causes burns

R37 - Irritating to respiratory system

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

H314 - Causes severe skin burns and eye damage

H335 - May cause respiratory irritation

H290 - May be corrosive to metals

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.