

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

15% Inhibited Hydrochloric Acid with 1% MUSOL A

Revision Date: 07-Feb-2013

Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name 15% Inhibited Hydrochloric Acid with 1% MUSOL A

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

Recommended Use Solvent
Uses Advised Against No information available

Details of the supplier of the safety data sheet

Halliburton Energy Services
Halliburton House, Howemoss Place
Kirkhill Industrial Estate
Dyce
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Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

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For further information, please contact

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Emergency telephone number

+44 1224 795277 or +1 281 575 5000

Emergency telephone §45 - (EC)1272/2008	
Europe	112
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): + 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin Corrosion / irritation	Category 2- H315
Serious Eye Damage / Eye Irritation	Category 2- H319
Specific Target Organ Toxicity - (Single Exposure)	Category 3- H335

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16

2. HAZARDS IDENTIFICATION

Classification Xi - Irritant.

Risk Phrases R36/37/38 Irritating to eyes, respiratory system and skin.

Label Elements

Hazard Pictograms



Signal Word

Warning

Hazard Statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Contains

Substances

Hydrochloric acid

Citric acid

Ethylene glycol monobutyl ether

CAS Number

7647-01-0

77-92-9

111-76-2

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

P280 - Wear protective gloves/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 - Take off contaminated clothing and wash before reuse

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

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P312 - Call a POISON CENTER or doctor/physician if you feel unwell

Other Hazards

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	EINECS	CAS Number	PERCENT	EEC Classification	EU - CLP Substance Classification	REACH No.
Hydrochloric acid	231-595-7	7647-01-0	10 - 30%	C; R34 Xi; R37	Skin Corr. 1B (H314) STOT SE 3 (H335)	No data available
Citric acid	201-069-1	77-92-9	1 - 5%	Xi: R36	Eye Irrit. 2 (H319)	01-2119457026-42
Ethylene glycol monobutyl ether	203-905-0	111-76-2	0 - 1%	Xn; R20/21/22 Xi; R36/38	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	01-2119475108-36

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

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 medical attention.

Eyes

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Ingestion

Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

May cause eye and skin burns. May cause respiratory irritation. May cause headache, dizziness, and other central nervous system effects.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Special hazards arising from the substance of mixture

Special Exposure Hazards

May form explosive mixtures with strong alkalis. Decomposition in fire may produce toxic gases. Reaction with steel and certain other metals generates flammable hydrogen gas. Do not allow runoff to enter waterways.

Advice for firefighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

See Section 12 for additional information

Environmental precautions

Prevent from entering sewers, waterways, or low areas.

Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Neutralize to pH of 6-8. Scoop up and remove.

Reference to other sections

See Section 12 for additional information.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Conditions for safe storage, including any incompatibilities

Store away from alkalis. Store away from oxidizers. Store in a cool well ventilated area. Keep container closed when not in use.

Specific End Use(s)

Exposure Scenario No information available

Other Guidelines No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Substances	EU	UK OEL	Netherlands	France OEL	Germany MAK/TRK
Hydrochloric acid	Not applicable	1 ppm	8 mg/m ³	Not applicable	2 ppm
Citric acid	Not applicable	10 mg/m ³	Not applicable	Not applicable	Not applicable
Ethylene glycol monobutyl ether	Not applicable	25 ppm	100 mg/m ³	2 ppm	20 ppm

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Hydrochloric acid	5 ppm	5 mg/m ³	8 mg/m ³	8 mg/m ³	Not applicable
Citric acid	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Ethylene glycol monobutyl ether	20 ppm	98 mg/m ³	98 mg/m ³	100 mg/m ³	Not applicable

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Exposure controls**Engineering Controls**

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Personal protective equipment**Respiratory Protection**

Acid gas respirator.

Hand Protection

Impervious rubber gloves.

Skin Protection

Rubber boots. Full protective chemical resistant clothing.

Eye Protection

Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

Environmental Exposure Controls

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State: Liquid

Color: Clear colorless

Odor: Pungent acrid

Odor Threshold: No information available

Property

Values

Remarks/ Method

pH:

0.8

Melting Point/Range

No data available

Freezing Point/Range (C):

No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point/Range	No data available
Flash Point	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	No data available
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable

Chemical Stability

Stable

Possibility of Hazardous Reactions

Will Not Occur

Conditions to Avoid

None anticipated

Incompatible Materials

Strong alkalis. Strong oxidizers.

Hazardous Decomposition Products

Chlorine. Hydrogen sulfide. Flammable hydrogen gas. Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects**Acute Toxicity**

Inhalation	Causes severe respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.
Eye Contact	May cause eye burns.
Skin Contact	May cause skin burns. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.
Ingestion	Causes burns of the mouth, throat and stomach. May produce nervous system effects such as feeling of weakness, unsteady walk, and dilation of blood vessels.

Chronic Effects/Carcinogenicity Prolonged, excessive exposure may cause erosion of the teeth. Prolonged or repeated exposure may cause fetal damage and testicular effects.

Substances	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid	LD50: 700 mg/kg	LD50: >5010 mg/kg	LC50: 3124 ppm 1h
Citric acid	11700 mg/kg	No data available	No data available
Ethylene glycol monobutyl ether	470 mg/kg	2270 mg/kg	450 ppm

12. ECOLOGICAL INFORMATION

Toxicity Ecotoxicity Effects

Substances	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Hydrochloric acid	No information available	LC50: 282 mg/L (Gambusia affinis)	No information available	No information available
Citric acid	No information available	No information available	No information available	TLM96: 100-330 ppm (Crangon crangon)
Ethylene glycol monobutyl ether	EC50: 839.56 mg/l (Skeletonema costatum)	LC50: > 1000 mg/l (Scophthalmus maximus juvenile)	No information available	EC50: >1000 mg/L (Daphnia magna)

Persistence and degradability

No information available

Bioaccumulative potential

Does not bioaccumulate

Substances	Log Pow
Ethylene glycol monobutyl ether	0.9

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Method

Contaminated Packaging

Disposal should be made in accordance with federal, state, and local regulations.

Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

IMDG/IMO

UN Number: UN1789,
UN Proper Shipping Name: Hydrochloric Acid Solution
Transport Hazard Class(es): , 8
Packing Group: , II
EMS: EmS F-A, S-B

RID

UN Number: UN1789,
UN Proper Shipping Name: Hydrochloric Acid Solution
Transport Hazard Class(es): , 8
Packing Group: , II

ADR

UN Number: UN1789,
UN Proper Shipping Name: Hydrochloric Acid Solution
Transport Hazard Class(es): , 8

14. TRANSPORT INFORMATION

Packing Group: , II

IATA/ICAO

UN Number: UN1789,
UN Proper Shipping Name: Hydrochloric Acid Solution
Transport Hazard Class(es): , 8
Packing Group: , II

Special Precautions for User None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

EINECS Inventory This product, and all its components, complies with EINECS
US TSCA Inventory All components listed on inventory or are exempt.
Canadian DSL Inventory All components listed on inventory or are exempt.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 1: Low hazard to waters.

Chemical Safety Assessment

No information available

16. OTHER INFORMATION**Full text of R-phrases referred to under Sections 2 and 3**

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

Key literature references and sources for datawww.ChemADVISOR.com/

Revision Date: 07-Feb-2013

Revision Note: Not applicable

This safety data sheet complies with the requirements of Regulation (EC) No. 453/2010**Disclaimer Statement**

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End of Safety Data Sheet