

## SAFETY DATA SHEET

### HYDROCHLORIC ACID 10-30%

Product Trade Name:

Revision Date: 07-Apr-2015

Revision Number: 8

#### 1. Identification

##### 1.1. Product Identifier

**Product Trade Name:** HYDROCHLORIC ACID 10-30%  
**Synonyms:** None  
**Chemical Family:** Inorganic acid  
**Internal ID Code** HM004821

##### 1.2 Recommended use and restrictions on use

**Application:** Solvent  
**Uses Advised Against** No information available

##### 1.3 Manufacturer's Name and Contact Details

**Manufacturer/Supplier** Halliburton Energy Services Inc.  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431  
Emergency Telephone: (281) 575-5000

**Prepared By** Chemical Stewardship  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

##### 1.4. Emergency telephone number

**Emergency Telephone Number** (281) 575-5000

#### 2. Hazard(s) Identification

##### 2.1 Classification in accordance with paragraph (d) of §1910.1200

Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Single Exposure)	Category 3 - H335
Corrosive to Metals.	Category 1 - H290

##### 2.2. Label Elements

###### Hazard Pictograms



Signal Word

Danger

**Hazard Statements**

H290 - May be corrosive to metals  
 H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage  
 H335 - May cause respiratory irritation

**Precautionary Statements**

**Prevention**

P234 - Keep only in original container  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
 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/eye protection/face protection

**Response**

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 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  
 P363 - Wash contaminated clothing before reuse  
 P390 - Absorb spillage to prevent material damage

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P405 - Store locked up  
 P406 - Store in corrosive resistant container with a resistant inner liner.

**Disposal**

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

**Contains**

**Substances**

Hydrochloric acid

**CAS Number**

7647-01-0

**2.3 Hazards not otherwise classified**

None known

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Hydrochloric acid	7647-01-0	10 - 30%	Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Met. Corr. 1 (H290)

The exact percentage (concentration) of the composition has been withheld as proprietary.

**4. First-Aid Measures**

**4.1. Description of first aid measures**

**Inhalation** If inhaled, move victim to fresh air and seek medical attention.

<b>Eyes</b>	Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.
<b>Skin</b>	In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

#### **4.2 Most important symptoms/effects, acute and delayed**

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause respiratory irritation. May cause burns to the mouth, throat, and stomach.

#### **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**

Water fog, carbon dioxide, foam, dry chemical.

##### **Extinguishing media which must not be used for safety reasons**

None known.

#### **5.2 Specific hazards arising from the substance or 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.

#### **5.3 Special protective equipment and precautions for fire-fighters**

##### **Special Protective Equipment for Fire-Fighters**

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

### **6. Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Use appropriate protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing vapors.

See Section 8 for additional information

#### **6.2. Environmental precautions**

Prevent from entering sewers, waterways, or low areas. Consult local authorities.

#### **6.3. 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.

### **7. Handling and storage**

#### **7.1. Precautions for Safe Handling**

##### **Handling Precautions**

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

##### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

#### **7.2. Conditions for safe storage, including any incompatibilities**

**Storage Information**

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

**8. Exposure Controls/Personal Protection**

**8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Hydrochloric acid	7647-01-0	TWA: 5 ppm	TWA: 2 ppm

**8.2 Appropriate engineering controls**

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

**8.3 Individual protection measures, such as personal protective equipment**

**Personal Protective Equipment** If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

**Respiratory Protection** Acid gas respirator.

**Hand Protection** Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

**Skin Protection** Full protective chemical resistant clothing. Rubber boots.

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

**Other Precautions** Eyewash fountains and safety showers must be easily accessible.

**9. Physical and Chemical Properties**

**9.1. Information on basic physical and chemical properties**

<b>Physical State:</b> Liquid	<b>Color:</b>	Clear colorless
<b>Odor:</b> Pungent acrid	<b>Odor</b>	No information available
	<b>Threshold:</b>	

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
<b>pH:</b>	0.8
<b>Freezing Point/Range</b>	-46 °C / -50 °F
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	110 °C / 230 °F
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
upper flammability limit	No data available
lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	26 mmHg
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	1.16
<b>Water Solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	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

**9.2. Other information**

Molecular Weight	36.5 g/mole
VOC Content (%)	No data available

**10. Stability and Reactivity****10.1. Reactivity**

Not expected to be reactive.

**10.2. Chemical Stability**

Stable

**10.3. Possibility of Hazardous Reactions**

Contact with metals may evolve flammable hydrogen gas.

**10.4. Conditions to Avoid**

None anticipated

**10.5. Incompatible Materials**

Strong alkalis.

**10.6. Hazardous Decomposition Products**

Flammable hydrogen gas. Chlorine. Hydrogen sulfide.

**11. Toxicological Information****11.1 Information on likely routes of exposure**

Principle Route of Exposure Eye or skin contact, inhalation.

**11.2 Symptoms related to the physical, chemical and toxicological characteristics****Acute Toxicity**

Inhalation	Causes severe respiratory irritation.
Eye Contact	Causes serious eye damage. Causes eye burns.
Skin Contact	Causes severe skin irritation. Causes severe burns.
Ingestion	Causes burns of the mouth, throat and stomach.

**Chronic Effects/Carcinogenicity** No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

**11.3 Toxicity data****Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid	7647-01-0	No data available	5010 mg/kg (Rabbit) > 5010 mg/kg (Rabbit) 1449 mg/kg (Mouse)	3124 mg/L (Rat) 1h 3.2 mg/L (Mouse) 8.3 mg/L (Rat) 1405 mg/L (Rat) 554 mg/L (Mouse)

<b>Substances</b>	<b>CAS Number</b>	<b>Skin corrosion/irritation</b>
Hydrochloric acid	7647-01-0	Causes severe burns
<b>Substances</b>	<b>CAS Number</b>	<b>Eye damage/irritation</b>
Hydrochloric acid	7647-01-0	Causes severe burns
<b>Substances</b>	<b>CAS Number</b>	<b>Skin Sensitization</b>
Hydrochloric acid	7647-01-0	Did not cause sensitization on laboratory animals (guinea pig)
<b>Substances</b>	<b>CAS Number</b>	<b>Respiratory Sensitization</b>
Hydrochloric acid	7647-01-0	No information available
<b>Substances</b>	<b>CAS Number</b>	<b>Mutagenic Effects</b>
Hydrochloric acid	7647-01-0	Not regarded as mutagenic.
<b>Substances</b>	<b>CAS Number</b>	<b>Carcinogenic Effects</b>
Hydrochloric acid	7647-01-0	No data of sufficient quality are available.
<b>Substances</b>	<b>CAS Number</b>	<b>Reproductive toxicity</b>
Hydrochloric acid	7647-01-0	Embryo and fetotoxicity has been observed in female rats exposed to maternally toxic levels of hydrogen chloride (450 mg/m <sup>3</sup> , 1hr.).
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - single exposure</b>
Hydrochloric acid	7647-01-0	May cause respiratory irritation.
<b>Substances</b>	<b>CAS Number</b>	<b>STOT - repeated exposure</b>
Hydrochloric acid	7647-01-0	No significant toxicity observed in animal studies at concentration requiring classification.
<b>Substances</b>	<b>CAS Number</b>	<b>Aspiration hazard</b>
Hydrochloric acid	7647-01-0	Not applicable

## 12. Ecological Information

### 12.1. Toxicity

#### Ecotoxicity Effects

Contains no substances known to be hazardous to the environment.

#### Product Ecotoxicity Data

No data available

#### Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Hydrochloric acid	7647-01-0	No information available	LC50 282 mg/L (Gambusia affinis) LC50 20.5 mg/L (Lepomis macrochirus) LC50 (96h) 3.25 – 3.5 (pH) (Lepomis macrochirus)	EC50 (3h) >= 5 and <= 5.5 (pH) (Activated sludge, domestic)	EC50 (48h) 4.9 (pH) (Daphnia magna)

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Hydrochloric acid	7647-01-0	The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Hydrochloric acid	7647-01-0	0.25

**12.4. Mobility in soil**

Substances	CAS Number	Mobility
Hydrochloric acid	7647-01-0	No information available

**12.5 Other adverse effects**

No information available

**13. Disposal Considerations****13.1. Waste treatment methods**

**Disposal Method** Disposal should be made in accordance with federal, state, and local regulations.  
**Contaminated Packaging** Follow all applicable national or local regulations.

**14. Transport Information****US DOT**

**UN Number:** UN1789  
**UN Proper Shipping Name:** Hydrochloric Acid Solution  
**Transport Hazard Class(es):** 8  
**Packing Group:** II  
**Environmental Hazards:** Not applicable  
**Reportable Quantity:** RQ (Hydrochloric Acid - 2273 kg.)  
**NAERG:** NAERG 157

**US DOT Bulk**

**DOT (Bulk)** Not applicable

**Canadian TDG**

**UN Number:** UN1789  
**UN Proper Shipping Name:** Hydrochloric Acid Solution  
**Transport Hazard Class(es):** 8  
**Packing Group:** II  
**Environmental Hazards:** Not applicable

**IMDG/IMO**

**UN Number:** UN1789  
**UN Proper Shipping Name:** Hydrochloric Acid Solution  
**Transport Hazard Class(es):** 8  
**Packing Group:** II  
**Environmental Hazards:** Not applicable  
**Reportable Quantity:** RQ (Hydrochloric Acid - 2273 kg.)  
**EMS:** EmS F-A, S-B

**IATA/ICAO**

**UN Number:** UN1789  
**UN Proper Shipping Name:** Hydrochloric Acid Solution  
**Transport Hazard Class(es):** 8  
**Packing Group:** II  
**Environmental Hazards:** Not applicable  
**Reportable Quantity:** RQ (Hydrochloric Acid - 2273 kg.)

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

**Special Precautions for User:** None

## 15. Regulatory Information

### US Regulations

<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>EPA SARA Title III Extremely Hazardous Substances</b>	Not applicable
<b>EPA SARA (311,312) Hazard Class</b>	Acute Health Hazard
<b>EPA SARA (313) Chemicals</b>	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	EPA Reportable Spill Quantity is 1592 Gallons based on Hydrochloric acid (CAS: 7647-01-0).
<b>EPA RCRA Hazardous Waste Classification</b>	If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:  Corrosivity D002
<b>California Proposition 65</b>	All components listed do not apply to the California Proposition 65 Regulation.
<b>MA Right-to-Know Law</b>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.

### Canadian Regulations

<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.
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## 16. Other information

### Preparation Information

<b>Prepared By</b>	Chemical Stewardship Telephone: 1-580-251-4335 e-mail: fdunexchem@halliburton.com
<b>Revision Date:</b>	07-Apr-2015
<b>Reason for Revision</b>	Update to Format SECTION: 2



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**Additional information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

**Key or legend to abbreviations and acronyms**

bw – body weight

CAS – Chemical Abstracts Service

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PEL – Permissible Exposure Limit

ppm – parts per million

STEL – Short Term Exposure Limit

TWA – Time-Weighted Average

UN – United Nations

h - hour

mg/m<sup>3</sup> - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

w/w - weight/weight

d - day

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

**Disclaimer Statement**

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**End of Safety Data Sheet**