

# MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 2

Revision date: 21 October 2008

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product code:** H015  
**Product name:** Hydrochloric Acid 15% H15  
**Company identification:** Schlumberger Technology Corporation  
110 Schlumberger Drive  
Sugar Land, Texas 77478, USA  
Telephone: 1-281-285-7873  
**Emergency telephone number:** USA: +1-281-595-3518 (24hr)

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

#### WARNING

**Main physical hazards:** Corrosive to metals.  
**Main health hazards:** Causes eye irritation. Causes skin irritation. Causes irritation if swallowed. May cause respiratory tract irritation.  
**Other hazards:** Gives off hydrogen by reaction with metals.  
**Precautions:** Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling.  
**HMIS classification:** Health: 2 Flammability: 0 Physical hazard: 0

**Form:** Liquid                      **Color:** Colorless - Light yellow                      **Odor:** Pungent  
**Principle routes of exposure:**  
Eye contact. Skin contact. Inhalation.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components classified as hazardous:

Component	CAS-No	Weight %- Range
Hydrochloric acid	7647-01-0	15

## 4. FIRST AID MEASURES

**Eye contact:** Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.  
**Skin contact:** After contact with skin, wash immediately with plenty of soap and water for at least 15 minutes. Seek medical attention.  
**Ingestion:** DO NOT induce vomiting. Call a physician or Poison Control Center immediately. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person.  
**Inhalation:** Move to fresh air. Obtain medical attention.

## 5. FIRE-FIGHTING MEASURES

<b>Fire hazard:</b>	Not combustible.
<b>Flash point:</b>	Not combustible
<b>Autoignition temperature:</b>	Not applicable.
<b>Flammability limits in air:</b>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
<b>Oxidizing properties:</b>	None.

**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.

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**

Thermal decomposition can lead to release of irritating gases and vapors. Gives off hydrogen by reaction with metals.

**Special protective equipment for firefighters:**

Wear self-contained breathing apparatus and protective suit.

**NFPA rating:**

<b>Health:</b>	<b>3</b>
<b>Flammability:</b>	<b>0</b>
<b>Instability:</b>	<b>0</b>
<b>Special:</b>	<b>None</b>

## 6. ACCIDENTAL RELEASE MEASURES

<b>Main physical hazards:</b>	Corrosive to metals.
<b>Other hazards:</b>	Gives off hydrogen by reaction with metals.
<b>Personal precautions:</b>	Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling. Ensure adequate ventilation. See also Section 8.
<b>Methods for cleaning up:</b>	Dam up. Neutralize with lime milk or soda and flush with plenty of water. Flush residual with plenty of water.
<b>Environmental precautions:</b>	No information available.

## 7. HANDLING AND STORAGE

**Handling:**

<b>Precautions:</b>	Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling.
<b>Safe handling advice:</b>	Keep airborne concentrations below exposure limits. Wear suitable protective equipment.
<b>Technical measures/ storage conditions:</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.
<b>Packaging requirements:</b>	High density polyethylene (HDPE) drum or can.
<b>Incompatible products:</b>	Strong bases. Metals. Oxidizing agents.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering measures to reduce exposure:</b>	Control the source.
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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>Hygiene measures:</b>	Avoid contact with skin, eyes and clothing. Keep airborne concentrations below exposure limits. Do not breathe vapors or spray mist. Wear suitable protective equipment.
<b>Respiratory protection:</b>	Use NIOSH approved respirator with organic vapor/acid gas protection (color coded yellow). Use SCBA (self contained breathing apparatus) in confined areas and for emergencies.
<b>Eye protection:</b>	Tightly fitting safety goggles. Face-shield.
<b>Hand protection:</b>	Impervious gloves. Butyl. Neoprene. Nitrile. Viton.
<b>Skin and body protection:</b>	Chemical resistant apron. For spills and emergencies, also wear boots and impervious suit.

**Occupational Exposure Limits**

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / Ceiling	STEL	Skin	TWA / C	STEL	Final PELs - Skin
Hydrochloric acid	2 ppm C			5 ppm C 7 mg/m <sup>3</sup> C		

**Particles Not Otherwise Regulated/Specified [PNOR or PNOS] (insoluble or poorly soluble):**

OSHA PEL's for Inert or Nuisance Dust are covered by PNOR limits: respirable fraction: 5 mg/m<sup>3</sup>; total dust 15 mg/m<sup>3</sup>.

ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m<sup>3</sup>, respirable particulate, and 10 mg/m<sup>3</sup>, inhalable particles.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Chemical characterization:</b>	Inorganic acid.
<b>Fire hazard:</b>	Not combustible.
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless - Light yellow
<b>Odor:</b>	Pungent
<b>Odor threshold:</b>	No information available.
<b>pH:</b>	< 2
<b>Boiling point/range:</b>	No data available.
<b>Flash point:</b>	Not combustible
<b>Flammability limits in air:</b>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
<b>Bulk density:</b>	Not applicable.
<b>Melting point/range:</b>	< 0 °C / 32 °F
<b>Decomposition temperature:</b>	No data available.
<b>Solubility:</b>	
<b>Water solubility:</b>	Soluble.
<b>Fat solubility:</b>	No information available.
<b>Partition coefficient (n-octanol/water):</b>	Not applicable.
<b>Relative density:</b>	1.1 (@ 16°C)
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	> 1 (air = 1)
<b>Viscosity:</b>	1 mPa.s (@ 20 °C)
<b>Evaporation rate:</b>	No data available.
<b>% Volatile (VOC):</b>	15

**10. STABILITY AND REACTIVITY****Stability:**

Stable under recommended storage conditions.

**Conditions to avoid:**

None known.

**Incompatibility with other substances:**

Metals. Bases. Oxidizers.

**Hazardous decomposition products:**

Chlorine, chlorine oxides, hydrogen chloride. May release hydrogen gas (explosive) on contact with metals.

**Hazardous polymerization:**

Hazardous polymerization does not occur.

**Other hazards:**

Gives off hydrogen by reaction with metals.

**11. TOXICOLOGICAL INFORMATION****PRODUCT TOXICOLOGICAL INFORMATION****Acute Health Hazard**

<b>Eye contact:</b>	Severe eye irritation. Causes pain and redness. Prolonged or repeated contact may cause mild burn.
<b>Skin contact:</b>	Severe irritant; causes pain, redness, dermatitis or mild burn.
<b>Ingestion:</b>	Irritant; may cause pain or discomfort to mouth, throat and stomach.
<b>Inhalation:</b>	Irritant; may cause pain and coughing.
<b>Sensitization - lung:</b>	Not known to cause allergic reaction.
<b>Sensitization - skin:</b>	Not known to cause allergic reaction.
<b>Toxicologically synergistic products:</b>	None known.
<b>Other information:</b>	Prolonged exposure at low concentration may cause erosion of the teeth.

**Chronic Health Hazard**

<b>Carcinogenic effects:</b>	None known.
<b>Mutagenic effects:</b>	Not known to cause heritable genetic damage.
<b>Teratogenic effects:</b>	Not known to cause birth defects or have a deleterious effect on a developing fetus.
<b>Reproductive toxicity:</b>	Not known to adversely affect reproductive functions and organs.
<b>Target organ effects:</b>	See COMPONENT TOXICOLOGICAL INFORMATION below.

**COMPONENT TOXICOLOGICAL INFORMATION**

Component	Target Organ Effects	LD50 / LC50
Hydrochloric acid	skin, eyes, respiratory system	= 3124 ppm (Inhalation LC50; Rat)

Component	IARC:	ACGIH - Carcinogens:	OSHA Regulated Carcinogens	NTP:
Hydrochloric acid		A4 - Not Classifiable as a Human Carcinogen		

**12. ECOLOGICAL INFORMATION****PRODUCT INFORMATION****COMPONENT INFORMATION**

Hydrochloric acid

<b>Bioaccumulation:</b>	Not applicable
<b>Persistence / degradability:</b>	The methods for determining biodegradability are not applicable to inorganic substances.
<b>Freshwater Fish Species</b>	= 282 mg/L (LC50; Gambusia affinis)
<b>Data</b>	= 3.6 mg/L (LC50; Lepomis macrochirus)

**13. DISPOSAL CONSIDERATIONS****Waste from residues / unused products:**

Dispose of by injection or other acceptable method in accordance with local regulations.

**Contaminated packaging:**

If reusable containers are used, send them back to the product supplier, after the required rinsing. Triple rinse, crush and ship to sanitary landfill unless prohibited by local regulations.

**EPA RCRA Hazardous Waste Code:**

D002

**14. TRANSPORT INFORMATION****DOT:**

<b>UN/NA Number:</b>	UN 1789
<b>CERCLA RQ:</b>	3,720 gal (HCl)
<b>Packing size:</b>	< 3720 gals
<b>Hazard class:</b>	8
<b>Proper shipping name:</b>	Hydrochloric acid solution (15%), 8, UN 1789, PG II
<b>Label(s):</b>	Corrosive 8
<b>Packing size:</b>	> 3720 gals
<b>Hazard class:</b>	8
<b>Proper shipping name:</b>	Hydrochloric acid solution (15%), 8, UN 1789, PG II, RQ
<b>Label(s):</b>	Corrosive 8

**IMDG/IMO**

<b>Shipping name:</b>	HYDROCHLORIC ACID SOLUTION (15%)
<b>Label(s):</b>	Corrosive 8
<b>Class or Div.:</b>	8
<b>UN number:</b>	UN 1789
<b>Packing group:</b>	II
<b>EMS:</b>	F-A, S-B

**14. TRANSPORT INFORMATION****ICAO/IATA**

<b>Shipping name:</b>	Hydrochloric acid solution (15%)	
<b>Label(s):</b>	Corrosive 8	
<b>Class or Div.:</b>	8	
<b>UN number:</b>	UN 1789	
<b>Packing group:</b>	II	
<b>Packing instruction (passenger aircraft):</b>	809	<b>Max Net Qty/Pkg: 1 L</b>
<b>Packing instruction (cargo aircraft):</b>	813	<b>Max Net Qty/Pkg: 30 L</b>

**TDG (Canada):**

<b>Shipping name:</b>	HYDROCHLORIC ACID SOLUTION (15%), 8, UN 1789, PG II
<b>Label(s):</b>	Corrosive 8
<b>PIN:</b>	UN 1789
<b>Class:</b>	8
<b>Packing group:</b>	II

*Note 1:*

*For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.*

**15. REGULATORY INFORMATION****International Chemical Inventories**

<b>Inventory - United States TSCA -</b>	This product complies with TSCA requirements.
<b>Canada DSL Inventory List -</b>	This product complies with DSL requirements.
<b>EC-No</b>	This product complies with EINECS/ELINCS requirements.
<b>China inventory of existing chemical substances list -</b>	This product complies with China inventory requirements.
<b>Inventory - Japan - Existing and New Chemicals list -</b>	This product does not comply with JPENCS
<b>Australia (AICS):</b>	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

**U.S.A. Regulations****OSHA Hazard Communication Standard:**

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

**EPA RCRA Hazardous Waste Code:**

D002

**EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):**

<b>Immediate (Acute) Health Hazard:</b>	YES
<b>Delayed (Chronic) Health Hazard:</b>	None
<b>Fire Hazard:</b>	None
<b>Sudden Release or Pressure Hazard:</b>	None
<b>Reactive Hazard:</b>	None

**EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):**

This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

**Additional Regulatory Information**

Hydrochloric acid

**EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4):** Listed

**CERCLA/SARA - Hazardous Substances and their RQs:** 2270 kg final RQ

5000 lb final RQ

**EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40):** 500 lb TPQ gas only

**California Proposition 65:** None

### International Hazard Class

**WHMIS Hazard Class:**

E (CORROSIVE MATERIAL)

D2B (Other Toxic Effects - Toxic Material)

## 16. OTHER INFORMATION

**Current references:**

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational safety and Health. Cincinnati, OH.*
5. LOLI Database.

**Explanation of terms:**

ACGIH: American Conference of Governmental Industrial Hygienist

ACGIH-TL: Threshold Limit Value

DSL: Domestic Substance List

HMIRC: Hazardous Materials Information Review Commission

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

NIOSH: National Institute of Occupational Safety & Health

NIOSH-REL: Recommended Exposure Limit

OSHA: Occupational Safety & Health Administration

OSHA-PEL: Permissible Exposure Limit

TSCA: Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit; units: [mg/m<sup>3</sup>]

**ACGIH Notations:**

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

**Section(s) revised:** 4, 8

**Additional advice:** Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

**Prepared by:** Well Services Safety & Environment (WSSE). Donald Graves.

**Revision date:** 21 October 2008

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**End of the Material Safety Data Sheet**