MATERIAL SAFETY DATA SHEET

Hydrochloric Acid 31 - 33%

SECTION 1 . Product and Company Idenfication

Product Name and Synonym: Hydrochloric Acid 31 - 33%

Product Code: H2609

Material Uses:

Manufacturer: Science Stuff
1104 Newport Ave

Austin, TX 78753
(512) 837-6020

Entry Date : 6/5/2013

Print Date: 6/5/2013

24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	3
Flammability:	0
Reactivity:	1

Hazard Rating:
Least 0 Slight 1 Moderate 2 High 3 Extreme 4

NA=Not Applicable NE=Not Established

SECTION 2 HAZARD IDENTIFICATION

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical state: Liquid. [Colorless]
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview:
DANGER!
POISON!
MAY BE FATAL IF INHALED OR SWALLOWED.
CAUSES SEVERE EYE AND SKIN BURNS.
CAUSES RESPIRATORY TRACT BURNS
MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS:
LUNGS, RESPIRATORY TRACT, SKIN, EYES

Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Keep container tightly closed and sealed until ready for use. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Eyes: Severely corrosive to eyes. Causes severe burns.
Skin: Severely corrosive to the skin. Causes severe burns.
Inhalation: Very toxic by inhalation. Corrosive to the respiratory system.
Ingestion: Very toxic if swallowed. May cause burns to mouth, throat and stomach.
Carcinogenicity: No known significant effects or critical hazards
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Target organs: May cause damage to the following organs: lungs, upper respiratory tract, skin, eyes.
Medical conditions aggravated by over-exposure:
Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk

may be aggravated by over-exposure to this product

SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
☐	Hydrochloric Acid 31 - 33%	CAS# 7647-01-0	100%	V/V	OSHA PEL, NIOSH 5 ppm, ACGIH 2 ppm

SECTION 4 FIRST AID MEASURES

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: CALL A PHYSICIAN. SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type:	Any means suitable for extinguishing surrounding fire
Fire / Explosion Hazards:	Thermal decomposition produces highly toxic fumes.
Fire Fighting Procedure:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Evacuate area. Wear self-contained breathing apparatus and protective clothing. Dispose of in a manner consistent with federal, state, local regulations.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Were appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-Proof tools and explosion- proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water- soluble or absorb with an inert dry material

and place in an appropriate waste disposal container.

SECTION 7 HANDLING AND STORAGE

Store in a cool, dry, well-ventilated place away from incompatible materials. Wash thoroughly after handling. Store away from heat, open flames, organic chemicals and sunlight.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection:	NIOSH/MSHA-approved respirator
Ventilation	
	Local Exhaust ☐
	Mechanical ☑
Protective Gloves:	NIOSH Approved Gloves
Eye Protection:	Goggles and Face Shield
Other Protective Equipment:	Wear appropriate clothing to prevent skin exposure

Product name - United States –

Hydrochloric Acid

ACGIH TLV (United States, 1/2008)
C: 2 ppm
OSHA PEL 1989 (United States, 3/1989)
CEIL: 5 ppm
CEIL: 7 mg/m3
NIOSH REL (United States, 6/2008
CEIL: 5 ppm
CEIL: 7 mg/m3
OSHA PEL (United States, 11/2006)
CEIL: 5 ppm
CEIL: 7 mg/m3

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: splash goggles, face shield

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.
Body recommended:
Chemical-resistant suit and gloves
Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated

exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	-114.3°C	Percent Volatile by Volume:	100%
Boiling Point:	42° C (108° F)	Evaporation Rate	Information not available
Vapor Pressure:	160mm Hg @ 70°F	Evaporation Standard	
Vapor Density:	1.27	Auto Ignition Temp	Not applicable
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	Not applicable
Appearance /Odors:	Colorless fuming liquid	Upper Flamm. Limit in Air	Not applicable
Flash Point:	Information not available		
Specific Gravity:	1.16		

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability:	Stable
Conditions to Avoid:	Avoid contact with incompatible materials.
Materials to Avoid:	Metals, bases, amines, and water
Hazardous Decomposition Products:	Contact with common metals releases hydrogen.
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

SECTION 11 Toxicological Information

Toxicity data- United States- Product/ ingredient name:

Hydrochloric Acid
LD50 900 mg/kg Oral Rabbit
LC50 1108 ppm Inhalation Vapor Mouse

Carcinogenic effects: No known significant effects or critical hazards.
Mutagenic effects: No known significant effects or critical hazards.
Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards.

SECTION 12 Ecological Information

Aquatic toxicity

Product/ ingredient name

Hydrochloric Acid

Acute LC50 282000 ug/L Fresh water Fish – Western mosquitofish – Gambusia affinis –

Adult 96 hours
Acute LC50 260000 ug/L Marine water Crustaceans – Common shrimp, sand shrimp – Crangon crangon – Adult 48 hours
Acute LC50 240000 ug/L Marine water Crustaceans – Green or Europeon shore crab – Carcinus maenas – Adult 48 hours

Environmental effects : No known significant effects or critical hazards.
Other adverse effects : No known significant effects or critical hazards.

SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 Transport Information

DOT Classification: Hydrochloric Acid Solution, 8, UN1789, PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States

HCS Classification:
Target organ effects
Corrosive material
Highly Toxic material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed
TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
SARA 302/304/311/312 extremely hazardous substances: Hydrochloric Acid
SARA 302/304 emergency planning and notifications: Hydrochloric Acid
SARA 302/304/311/312 hazardous chemicals: Hydrochloric Acid
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Hydrochloric Acid
Immediate (acute) health hazard, Delayed (chronic) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: Hydrochloric Acid
Clean Air Act (CAA) 112 accidental release prevention: No products were found
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.
Clean Air Act (CAA) 112 regulated toxic substance: No products were found

DEA List I Chemicals : not listed
(Precursor Chemicals)
DEA List II Chemicals : listed
(essential Chemicals)

SARA 313
Form R – Reporting Requirements: Hydrochloric Acid
CAS number : 7647-01-0 Concentration : 100

Supplier notification : Hydrochloric Acid
CAS number : 7647-01-0 Concentration : 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Massachusetts Substance : This material is listed.
New Jersey Hazardous Substances : This material is listed.
New York Acutely Hazardous Substances : This material is listed.
Pennsylvania RTK Hazardous Substances : This material is listed.
Canada

WHMIS (Canada) :
Class D-1A: Material causing immediate and serious toxic effects (Very toxic)
Class E: Corrosive material

Canadian lists :
CEPA Toxic Substance: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.
CEPA DSL/ CEPA NDSL : CEPA DSL:
This material is listed or exempted.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Flammability

Health

Reactivity

NFPA

Revisions

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The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.