

# MATERIAL SAFETY DATA SHEET

Hydrochloric acid 0.5 Normal in IPA

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Hydrochloric acid 0.5 Normal in IPA

Product Code: 4191

Material Uses:

Manufacturer: Science Stuff  
1104 Newport Ave

Austin, TX 78753

(512) 837-6020

Entry Date : 6/5/2013

Print Date: 6/6/2013

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

|               |   |
|---------------|---|
| Health:       | 2 |
| Flammability: | 3 |
| Reactivity:   | 0 |

Hazard Rating:  
Least Slight Moderate High Extreme  
0 1 2 3 4  
NA=Not Applicable NE=Not Established

## SECTION 2 HAZARD IDENTIFICATION

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

## SECTION 3 MIXTURE COMPONENTS

| SARA 313                            | Component                      | CAS Number     | Percent Comp. | Dimension | Exposure Limits                                   |
|-------------------------------------|--------------------------------|----------------|---------------|-----------|---|
| <input checked="" type="checkbox"/> | Hydrochloric Acid              | CAS# 7647-01-0 | 4.2%          | V/V       | OSHA PEL (C)<br>5 ppm, (C) 7<br>mg/m <sup>f</sup> |
| <input checked="" type="checkbox"/> | Isopropyl Alcohol (2-propanol) | CAS# 67-63-0   | Balance       | V/V       | OSHA TWA<br>400 ppm, STEL<br>500 ppm              |

## SECTION 4 FIRST AID MEASURES

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: 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. If symptoms persist, seek medical attention.

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: If swallowed, induce vomiting immediately after giving two glasses of water. 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: Vapor may travel considerable distance to

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source of ignition and flash back.

Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Eliminate Ignition Sources. Neutralize with: Soda lime, soda ash. Absorb with vermiculite or other inert material. Place in container.

**SECTION 7 HANDLING AND STORAGE**

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory Protection: NIOSH/MSHA-approved respirator

Ventilation

Local Exhaust

Mechanical

Protective Gloves: Gloves to prevent skin exposure as rubber or vinyl

Eye Protection: Splash Goggles

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

|                      |                               |                             |                           |
|----------------------|-------------------------------|-----------------------------|---------------------------|
| Melting Point:       | ~-89° C                       | Percent Volatile by Volume: | 100%                      |
| Boiling Point:       | ~+82° C                       | Evaporation Rate            | Information not available |
| Vapor Pressure:      | ~33 @25° c                    | Evaporation Standard        |                           |
| Vapor Density:       | ~2.1 (air = 1)                | Auto Ignition Temp          | 399° C                    |
| Solubility in Water: | Soluble                       | Lower Flamm. Limit in Air   | 2%                        |
| Appearance /Odors:   | Clear water white / IPA smell | Upper Flamm. Limit in Air   | 12%                       |
| Flash Point:         | ~12° C (Closed Cup)           |                             |                           |
| Specific Gravity:    | 0.79                          |                             |                           |

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

|                                   |  |
|-----------------------------------|--|
| Stability:                        | Stable   |
| Conditions to Avoid:              | Avoid heat and ignition sources                |
| Materials to Avoid:               | Metals, strong bases, amines, strong oxidizers |
| Hazardous Decomposition Products: | Carbon Oxides                                  |
| Hazardous polymerization:         | Will Not Occur                                 |
| Conditions to Avoid:              | None known                                     |

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**SECTION 11 Toxicological Information**

United States

Product/ingredient name – Isopropyl Alcohol

| Test            | Result      | Route          | Species |
|-----------------|-------------|----------------|---------|
| LD50            | 12800 mg/kg | Dermal         | Rabbit  |
| LD50            | 2735 mg/kg  | Dermal         | Rat     |
| Intraperitoneal |             |                |         |
| LD50            | 1088 mg/kg  | Intravenous    | Rat     |
| LD50            | 5045 mg/kg  | Oral           | Rat     |
| LD50            | 5000 mg/kg  | Oral           | Rat     |
| LD50            | 6410 mg/kg  | Oral           | Rabbit  |
| Intraperitoneal |             |                |         |
| LC50            | 16000 ppm   | Inhalation Gas | Rat     |

Carcinogenicity Classification

Product/ingredient name: Isopropyl Alcohol

ACGIH: A4

IARC: 3

EPA: -

NIOSH: -

NTP: -

OSHA: -

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**

Ecotoxicity data - United States

| Result                | Species | Exposure |
|-----------------------|---------|----------|
| Acute EC50 10000 mg/L | Fish    | 48 hours |
| Acute LC50 10400 mg/L | Fish    | 96 hours |
| Acute LC50 11130 mg/L | Fish    | 96 hours |
| Acute LC50 9640 mg/L  | Fish    | 96 hours |
| Acute LC50 6550 mg/L  | Fish    | 96 hours |
| Acute LC50 <1400 mg/L | Fish    | 96 hours |

Result: Acute LC50<1400000 ug/L

Species: Fish – Western mosquitofish–Gambusia affinis – 20 to 30 mm

Exposure: 96 hours

Result: Acute LC50 1400000 to 1950000ug/L Marine water

Species: Crustaceans – Common shrimp, sand shrimp – Crangon crangon

Exposure: 48 hours

Result: Acute LC50 11130000ug/L Fresh water

Species: Pimephales promelas – Juvenile (Fledgling, Hatchling, Weanling) 4 to 8 weeks  
1.1 to 3.1 cm

Exposure: 96 hours

Result: Acute LC50 10400000 to 1060000000 ug/L Fresh water

Species: Fish – Fathead minnow-Pimephales promelas 29 days – 20 mm-0.103 g

Exposure: 96 hours

Result: Acute LC 50 6550000to 7450000 ug/L

Species: Fish – Fathead minnow – Pimephales promelas – 31 days – 17.4 mm – 0.082 g

Exposure: 96 hours

Result: Acute LC50 4200000 ug/L Fresh water

Species: Fish – Harlequinfish, red rasbora – Rasbora – heteromorpha – 1 to 3 cm

Exposure: 96 hours

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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 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: UN2924, Flammable Liquid, Corrosive, n.o.s. (Isopropanol, Hydrochloric acid), 3, (8), PG II

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

SECTION 15 Regulatory Information

Table with 5 columns: Ingredient, TSCA, EC, Japan, Australia. Rows: Isopropyl Alcohol (67-63-0), Water (7732-18-5)

Table with 5 columns: Ingredient, Canada, Korea, DSL, NDSL, Phil. Rows: Isopropyl Alcohol (67-63-0), Water (7732-18-5)

Table with 5 columns: Ingredient, SARA 302, SARA 313, RQ, TPQ, List, Chemical Catg. Rows: Isopropyl Alcohol (67-63-0), Water (7732-18-5)

Table with 4 columns: Ingredient, RCRA, CERCLA, TSCA, 261.33, 8(d). Rows: Isopropyl Alcohol (67-63-0), Water (7732-18-5), No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Mixture / Liquid)

Australian Hazchem Code: 2[S]2
Poison Schedule: None allocated.

Hydrochloric Acid:

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

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(Precursor Chemicals)  
DEA List II Chemicals : listed  
(essential Chemicals)

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

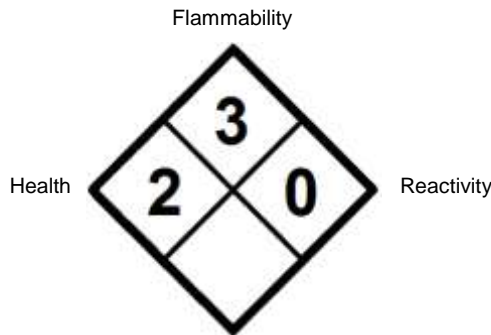
Supplier notification : Hydrochloric Acid  
CAS number : 7647-01-0 Concentration : 100

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**



**Revisions**

|           |     |                                   |
|-----------|-----|-----------------------------------|
|           | 0.1 | Revised DOT to add Class 8 sub LS |
| 9/28/2011 | 0.2 | Revised to 16 sec LS              |

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.