MATERIAL APPROVAL REQUEST FORM

The top portion of this form must be filled out and attached to the material safety data sheet being sent out for environmental consideration.

Send to: ***Dawanna Wright - Sarepta***

PLANT: ___Sarepta_____ REQUESTED BY: _Jody Jenkins_____

MATERIAL: __Hydrochroric acid_____

LOCATION: _____QA Lab_____

FUNCTION: _____acid rinse for SMC_____

ESTIMATED MONTHLY USAGE: _____

Bottom Portion to be completed by V. Shah – fax: 248-593-9519

_____ Approved for Use

_____ Approved for Trial Only (**Notify V. Shah of results of trial for reclassification of material)**

_____ Provisionally Approved Contingent Upon: _____

_____

_____

_____ Permitted for Use but a more acceptable material needs to be found: ___

_____

_____

_____ Rejected: _____

_____

_____

Signature: _____ **Date:** _____

Form: Health, Safety & Environmental

Issue Date: 9/27/06

NEW MATERIAL OR CHEMICAL APPROVAL FORM

GENERAL INFORMATION

CHEMICAL NAME: Hydrochloric acid 10%
REQUESTING PERSON: Jody Jenkins
DEPT.: Quality **DATE OF REQUEST:** 5/2/08
MANUFACTURER: Science Lab
VENDOR CONTACT:Science Lab **PHONE:1-800-901-7247**
CIRCLE ONE: SOLID (LIQUID) GAS
SPECIFIC HAZARDS: attached msds

***HAZARDOUS INGREDIENTS:**

CAS NUMBER	CHEMICAL NAME	CONCENTRATION
7647-01-0	Hydrogen Chloride	2-3.8% by weight

**HMIS or NFPA RATINGS

HEALTH	FLAMMABLE	REACTIVITY
0 1 2 (3) 4	(0) 1 2 3 4	(0) 1 2 3 4

****PPE REQUIREMENTS:**

USAGE INFORMATION

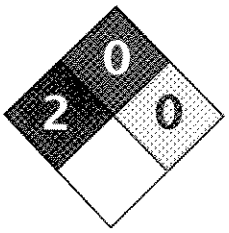
CHEMICAL USE: acid rinse for SMC

AREA OF USE:Lab
***OTHER AREAS AFFECTED:**
PROJECTED VOLUME:<2.5 l / month
NEW PROCESS: (YES) NO
TRIAL PROCESS: YES (NO)
DURATION OF TRIAL (if yes):
PROCESS CHANGE: YES (NO)
REPLACEMENT CHEMICAL: YES (NO)
PLEASE EXPLAIN ALL YES ANSWERS ABOVE: SMC

APPROVED: ____ **YES** ____ **NO** EHS Signature: _____ Date: _____

Env-LF-003
Date: 2/10/03

ScienceLab.com
Chemicals & Laboratory Equipment



Health	3
Fire	0
Reactivity	0
Personal Protection	

Material Safety Data Sheet
Hydrochloric acid, 10% MSDS

Section 1: Chemical Product and Company Identification

Product Name: Hydrochloric acid, 10%

Catalog Codes: SLH1732

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Hydrochloric acid; Water

CI#: Not applicable.

Synonym: Hydrochloric Acid, 10% ((w/v), N.F

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Hydrogen chloride	7647-01-0	2-3.8
Water	7732-18-5	96.2-98

Toxicological Data on Ingredients: Hydrogen chloride: GAS (LC50): Acute: 4701 ppm 0.5 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of ingestion. Slightly hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive), of inhalation (lung sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (sensitizer).
CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrogen chloride].
MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to kidneys, liver, mucous membranes, upper respiratory tract, skin, eyes, , teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:
Non combustible.
Calcium carbide reacts with hydrogen chloride gas with incandescence.
Uranium phosphide reacts with hydrochloric acid to release spontaneously flammable phosphine.

Rubidium acetylene carbides burns with slightly warm hydrochloric acid.
Lithium silicide in contact with hydrogen chloride becomes incandescent. When dilute hydrochloric acid is used, gas spontaneously flammable in air is evolved.
Magnesium boride treated with concentrated hydrochloric acid produces spontaneously flammble gas.
Cesium acetylene carbide burns hydrogen chloride gas.
Cesium carbide ignites in contact with hydrochloric acid unless acid is dilute.
Reacts with most metals to produce flammable Hydrogen gas.
(Hydrochloric Acid)

Special Remarks on Explosion Hazards:
Hydrogen chloride in contact with the following can cause an explosion, ignition on contact, or other violent/vigorous reaction: Acetic anhydride AgClO + CCl4 Alcohols + hydrogen cyanide, Aluminum Aluminum-titanium alloys (with HCl vapor), 2-Amino ethanol, Ammonium hydroxide, Calcium carbide Ca3P2 Chlorine + dinitroanilines (evolves gas), Chlorosulfonic acid Cesium carbide Cesium acetylene carbide, 1,1-Difluoroethylene Ethylene diamine Ethylene imine, Fluorine, HClO4 Hexalithium disilicide H2SO4 Metal acetylides or carbides, Magnesium boride, Mercuric sulfate, Oleum, Potassium permanganate, beta-Propiolactone Propylene oxide Rubidium carbide, Rubidium, acetylene carbide Sodium (with aqueous HCl), Sodium hydroxide Sodium tetraselenium, Sulfonic acid, Tetraselenium tetranitride, U3P4 , Vinyl acetate. Silver perchlorate with carbon tetrachloride in the presence of hydrochloric acid produces trichloromethyl perchlorate which detonates at 40 deg. C.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

Large Spill:
Corrosive liquid.
Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as alkalis, moisture.
May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protection:
Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Hydrogen chloride
STEL: 7.5 (mg/m3) from ACGIH (TLV) [United States]
STEL: 5 (ppm) from ACGIH (TLV) [United States]
CEIL: 5 (ppm) from NIOSH
CEIL: 7.5 (mg/m3) from NIOSH
CEIL: 5 (ppm) from OSHA (PEL) [United States]
CEIL: 7 (mg/m3) from OSHA (PEL) [United States]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Disagreeable and choking. (Strong.)

Taste: Acid. (Strong.)

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): Acidic.

Boiling Point: The lowest known value is 100°C (212°F) (Water).

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 1.05 (Water = 1)

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Vapor Density: The highest known value is 0.62 (Air = 1) (Water).

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:
Easily soluble in cold water.
Soluble in hot water, diethyl ether.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances:
Reactive with alkalis.
Slightly reactive to reactive with oxidizing agents, organic materials, metals.

Corrosivity:
Highly corrosive in presence of aluminum, of zinc, of copper, of stainless steel(304), of stainless steel(316).
Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Absorption of gaseous hydrogen chloride on mercuric sulfate becomes violent @ 125 deg. C.
Sodium reacts very violently with gaseous hydrogen chloride.
Calcium phosphide and hydrochloric acid undergo very energetic reaction.
It reacts with oxidizers releasing chlorine gas.
Incompatible with, alkali metals, carbides, borides, metal oxides, vinyl acetate, acetylides, sulphides, phosphides, cyanides, carbonates.
Reacts with most metals to produce flammable Hydrogen gas.
Isolate hydrogen chloride from heat, direct, alkalies (reacts vigorously), organic materials(reacts vigorously with many organic materials), and oxidizers (especially nitric acid and chlorates), amines, metals, copper and alloys (e.g. brass), hydroxides, zinc (galvanized materials), lithium silicide (incandescence), sulfuric acid(increase in temperature and pressure)
Hydrogen chloride gas is emitted when this product is in contact with sulfuric acid.
Adsorption of Hydrochloric Acid onto silicon dioxide results in exothmeric reaction.
Hydrogen chloride causes aldehydes and epoxides to violently polymerize.
Hydrogen chloride or Hydrochloric Acid in contact with the folloiwng can cause explosion or ignition on contact or other violent/vigorous reaction: Acetic anhydride, Alcohols + hydrogen cyanide, Aluminum, Aluminum phosphide, Aluminum-titanium alloys (with HCl vapor), 2-Amino ethanol, Ammonium, Ammonium hydroxide, 1,4-Benzoquinone diimine, Calcium acetylide (incandescence upon warming), Calcium carbide, Calcium phosphide, Carbon tetrachloride + silver perchlorate (produce trichlormethyl perchlorate), Cesium acetylene carbide, Cesium carbide, Cesium telluroacylates, Chlorine + dinitroanilines (evolves gas), Chloroacetaldehyde oxime, Chlorosulfonic acid, Cyanogen chloride (when catalyzed by HCl), 1,1-Difluoroethylene, Dinitroanilines, Ethylene, Ethylene diamine, Ethyl 2-formylpropionate oxime (when generated by using HCl as a catalyst), Ethylene imine, Fluorine, HClO4, Hexalithium disilicide, Hydrogen peroxide, Metal acetylides, carbides, Magnesium boride, Methyl vinyl ether, Mercuric sulfate, Nitric acid + glycerol, Oleum, Perchloric acid, Potassium, Potassium permanganate, beta-Propiolactone, Propylene oxide, Rubidium acetylide, Rubidium carbide, Rubidium acetylenecarbide, Silicondioxide, Silverchlorite, Sodium(withaqueousHCl), Sodium
2-allyloxy-6-nitrophenylpyruvate oxime, Sodium hydroxide, Sodium tetraselenium, Sulfonic acid, Sulfuric acid, Tetraselenium tetranitride, 2,4,6-Tri(2-acetylhydrazino)-1,3,5-trinitrobenzene, Uranium phosphide, Vinyl acetate.
Hydrogen chloride gas can react with formaldehyde to form bis(chloromethyl)ether, a human carcinogen.
Most metals, as well as certain coatings, plastics, and rubbers, are attacked by hydrogen chloride.
Addition of hydrochloric acid to the following results in an exothermic reaction: Cesium cyanotridecahydrodecarborate(2-), Potassium ferricyanide, Vinylidene fluoride.
Addition of hydrochloric acid to potassium ferrocyanide or ammonium hexacyanoferrate(II) results in an endothermic reaction.
Hydrochloric acid in the presence of alcohol and glycols results in dehydration reactions.

Special Remarks on Corrosivity:
This compound is highly corrosive when in solution (especially to most metals except: gold, mercury, platinum, silver, and tantalum). The anhydrous gas is not corrosive .
(Hydrogen chloride)

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 900 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 1108 ppm, 1 hours [Mouse].
Acute toxicity of the vapor (LC50): 3124 ppm, 1 hours [Rat].
(Hydrochloric Acid)

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Hydrogen chloride].
Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes, , teeth.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant).
Hazardous in case of ingestion.
Slightly hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive), of inhalation (lung sensitizer, lung corrosive).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Doses (LDL/LCL)
LDL [Man] -Route: Oral; 2857 ug/kg
LCL [Human] - Route: Inhalation; Dose: 1300 ppm/30M
LCL [Rabbit] - Route: Inhalation; Dose: 4413 ppm/30M
(Hydrochloric Acid)

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects (fetoxicity).
May affect genetic material.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Mildly Corrosive. Causes skin irritation and possible burns.
Eyes: Mildly Corrosive. Causes eye irritation possible burns.
Inhalation: May cause irritation of the nose, throat, bronchi (upper respiratory tract), coughing, sneezing, hoarseness. May affect the lungs/respiration. May affect the liver.
Ingestion: Causes irritation gastrointestinal tract with nausea, vomitting abdominal cramps, and diarrhea. May affect behavior, the cardiovascular system, respiration and urinary system (kidneys).
Chronic Potential Health Effects:
Prolonged or repeated inhalation or ingestion may affect liver, respiration(changes in pulmonary function, chronic bronchitis), teeth (yellowing of teethand erosion of tooth enamel), kidneys, and behavior.
Prolonged or repeated skin contact may cause dermatitis.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Class 8: Corrosive material

Identification: : Hydrochloric acid, solution UNNA: 1789 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Hydrochloric acid
Illinois toxic substances disclosure to employee act: Hydrochloric acid
Illinois chemical safety act: Hydrochloric acid
New York release reporting list: Hydrochloric acid
Rhode Island RTK hazardous substances: Hydrochloric acid
Pennsylvania RTK: Hydrochloric acid
Minnesota: Hydrochloric acid
Massachusetts RTK: Hydrochloric acid
Massachusetts spill list: Hydrochloric acid
New Jersey: Hydrochloric acid
New Jersey spill list: Hydrochloric acid
Louisiana RTK reporting list: Hydrochloric acid
Louisiana spill reporting: Hydrochloric acid
TSCA 8(b) inventory: Hydrochloric acid; Water
TSCA 4(a) proposed test rules: Hydrochloric acid
SARA 302/304/311/312 extremely hazardous substances: Hydrochloric acid
SARA 313 toxic chemical notification and release reporting: Hydrochloric acid 10%
CERCLA: Hazardous substances.: Hydrochloric acid: 5000 lbs. (2268 kg);

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS E: Corrosive liquid.

DSCL (EEC):
This product is not classified according
to the EU regulations.
Not applicable.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Full suit.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 10/09/2005 05:45 PM

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