ISO9001:2000 certified

Material Safety Data Sheet

Extraction Solvent

Section 1 - Chemical Product and Company Identification

MSDS Name:

Extraction Solvent (4ml Hydrochloric acid in 1000ml reagent alcohol)

Catalog Numbers:

LC14180

Synonyms:

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
64-17-5	Ethyl alcohol	<90
67-56-1	Methyl alcohol	<5
67-63-0	Isopropyl alcohol	<5
7647-01-0	Hydrogen chloride	0.4

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless

Warning! Flammable liquid. May be fatal or cause blindness if swallowed. May cause irritation with possible injury by all exposure routes.

Target Organs: none known.

Potential Health Effects

Eye:

Vapors are irritating to the eye, liquid contact may result in clouding of the cornea, erosion, up to total corneal opacification and loss of the eye. 2% aqueous solutions applied to human eyes for seconds were without significant injury. Solutions of 0.25N-1N causes scarring of rabbit cornea, injury at pH less than 3.

Skin:

Skin may turn brown-yellow. Deep burns are slow to heal and scarring may occur.

Ingestion:

Burns, perforation, and in severe cases circulatory collapse leading to renal, liver or heart failure. May cause narcosis, CNS depression leading torespiratory/circulatory failure, pain, blindness, coma, kidney/liver damage, cyanosis, edema, death.

Inhalation:

Above 5ppm exposure ulceration of the respiratory tract with bronchitis, pneumonia, palpitations, dental erosion, and perforation occurring; 6-8hr latency period can occur. Acute burning of nose, throat with coughing, choking, dizziness, difficulty swallowing. Frothy sputum, cyanosis, with circulatory shock, asphyxiation, gastric hemorrhage, and death occurring from severe exposure.

Chronic:

Dental erosion, jaw necrosis, respiratory disease (bronchitis, pneumonitis), dermatitis, conjunctivitis (with possible corneal scarring, loss of vision), fever. Respiratory irritation, headache, central nervous system depression (somnolence, lack of concentration), visual impairment and risk of paranasal/laryngeal cancer.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once. Cover burns with loose sterile non-medicated bandages.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes. Cover burns with a dry sterile bandage (secure, not tight).

Ingestion:

Do NOT induce vomiting. Get medical aid at once. Give conscious victim large quantities of water to dilute acid. If vomiting occurs, keep head lower than hips to prevent aspiration.

Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

Vapors heavier than air, may travel considerable distance and flash back from source of ignition. Move container if possible, avoid breathing vapors or dust. Dangerous fire/negligible explosion hazard when exposed to heat or flame. Vapor-air mixtures explosive above flash point.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

No information found.

Flash Point:

No information found.

NFPA Rating:

CAS# 7732-18-5: Not published.
CAS # 64-17-5 health-0; flammability-3; reactivity-0
CAS # 67-56-1 health-1; flammability-3; reactivity-0
CAS # 67-63-0 health-1; flammability-3; reactivity-0
CAS# 7647-01-0: Not published.

Explosion Limits:

Lower: Upper:

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Scoop material into suitable (plastic or glass) container, label for disposal. Shut off ignition source, avoid vapors. Isolate, ventilate spill area. Water may be used to reduce vapor hazard - keep out of sewers and drains, vapors explosive, may ignite.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

Storage:

Store capped at room temperature. Keep away from incompatible materials. Protect from heat and incompatibles. Vapors heavier than air, may travel considerable distance and ignite or explode. Store capped as a flammable liquid in safety cabinet or vault that is ventilated.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Provide local exhaust or general dilution ventilation.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Ethyl alcohol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m3 TWA	1000 ppm TWA; 1900 mg/m3 TWA;
Methyl alcohol	200 ppm TWA;250 ppm STEL;skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m3 TWA	200 ppm TWA; 260 mg/m3 TWA;
Isopropyl alcohol	(400 ppm) TWA;(500ppm) STEL	400 ppm TWA; 980 mg/m3 TWA	400 ppm TWA; 980 mg/m3 TWA;
Hydrogen chloride	None of the components are on this list.	None of the components are on this list.	C 5 ppm; C 7 mg/m3;

OSHA Vacated PELs

Ethyl alcohol: 1000 ppm TWA; 1900 mg/m3 TWA
Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA
Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA
Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA

Personal Protective Equipment

Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode. High Levels- CCROV/SAR/SCBA. Firefighting- SCBAF:PP,PD. (Respirator Codes: DHEW (NIOSH) Publication No. 78-210). Respirator Codes DHEW (NIOSH) Publication No. 78-210. Firefighting - SCBAF:PP.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	colorless
Odor:	alcohol-like
pH:	acidic
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Evaporation Rate:	No information found.
Viscosity:	No information found.
Boiling Point:	No information found.
Freezing/Melting Point:	No information found.
Decomposition Temperature:	No information found.
Solubility in water:	Soluble.
Specific Gravity/Density:	No information found.
Molecular Formula:	No information found.
Molecular Weight	No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials

Acetyl chloride, acetyl bromide, nitric acid, aluminum sesquibromide ethylate, bromine pentafluoride, calcium hypochlorite, hydrogen peroxide/sulfuric acid mixes, iodine-mercuric oxide, perchlorate-dimethoxy propane, perchloric acid, sulfuric treated permanganates, ethanol recrystallized perchlorates, potassium superoxide, sodium hydrazide, sulfuric-dichromate mix., ammonium hydroxide-silver oxide mix., hydrogen peroxides, calcium carbide, magnesium, cyanuric chloride, chloroform-sodium hydroxide, chromic anhydride, phosgene-iron.

Hazardous Decomposition Products

Hydrogen chloride, oxides of carbon, formaldehyde.

Hazardous Polymerization

Has not been reported

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.
CAS# 64-17-5: KQ6300000.
CAS# 67-56-1: PC1400000.
CAS# 67-63-0: NT8050000.
CAS# 7647-01-0: MW4025000.

LD50/LC50:

CAS# 7732-18-5:
Oral, rat: LD50 = >90 mL/kg.
CAS# 64-17-5:
Inhalation, mouse: LC50 =39 gm/m3/4H
Inhalation, rat: LC50 =20000 ppm/10H
Oral, mouse: LD50 = 3450 mg/kg
Oral, rabbit: LD50 = 6300 mg/kg
Oral, rat: LD50 = 7060 mg/kg.
CAS# 67-56-1:
Inhalation, rat: LC50 =64000 ppm/4H
Oral, mouse: LD50 = 7300 mg/kg
Oral, rabbit: LD50 = 14200 mg/kg
Oral, rat: LD50 = 5628 mg/kg
Skin, rabbit: LD50 = 15800 mg/kg.
CAS# 67-63-0:
Oral, mouse: LD50 = 3600 mg/kg
Oral, rabbit: LD50 = 6410 mg/kg
Oral, rat: LD50 = 5045 mg/kg

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 64-17-5
ACGIH: A4 - Not Classifiable as a Human Carcinogen
California: Not listed.
NIOSH: Not listed.
NTP: Not listed.
OSHA: Not listed.
IARC: Not listed.
CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 67-63-0
ACGIH: Not listed.
California: Not listed.

NIOSH: Not listed.
NTP: Not listed.
OSHA: Not listed.
IARC: Group 3
CAS# 7647-01-0
ACGIH: Not listed.
California: Not listed.
NIOSH: Not listed.
NTP: Not listed.
OSHA: Not listed.
IARC: Group 3

Epidemiology:

Teratogenicity:

Reproductive:

Mutagenicity

Neurotoxicity

Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Flammable liquids, corrosive n.o.s. (Ethanol, Hydrochloric acid)
Hazard Class: 3
UN Number: UN2924
Packing Group: PG II

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 64-17-5 is listed on the TSCA Inventory.
CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 67-63-0 is listed on the TSCA Inventory.
CAS# 7647-01-0 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ)

CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)
CAS# 7647-01-0: final RQ = 5000 pounds (2270 kg)

CERCLA/SARA Section 313

This material contains Methyl alcohol (CAS# 67-56-1, <5%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
This material contains Isopropyl alcohol (CAS# 67-63-0, <5%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
This material contains Hydrogen chloride (CAS# 7647-01-0, 3-5%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous

CAS# 7647-01-0 is considered highly hazardous by OSHA.

US State

State Right to Know

Ethyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Isopropyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
Hydrogen chloride can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations

WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm.
WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm.
WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm.
WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm.

European/International Regulations

Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 64-17-5 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 67-63-0 is listed on Canada's DSL List.
CAS# 7647-01-0 is listed on Canada's DSL List.

Canada Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.
CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.
CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List.
CAS# 7647-01-0 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 15, 1998
Revision Date: May 19, 2006

Material Safety Data Sheet

Extraction Solvent

Information in this MSDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made