

Material safety data sheet

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Name: Hydrochloric acid
Catalog Numbers: 20010

Company Identification:

Junsei Chemical Co., Ltd.
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Web: <http://www.junsei.co.jp/>
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EMERGENCY TELEPHONE NUMBER: +81-48-986-6161(Reagent Chemical Div.)
(Japanese language only)

CREATION DATE: Oct 1 2001

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient 1

Chemical name: Hydrochloric acid
Cas No.: 7647-01-0
EINECS No.: 231-595-7
Content: 35.0+%

Ingredient 2

Chemical name: Water
Cas No.: 7732-18-5
EINECS No.: 231-791-2
Content: 75.0%

Hazard Symbols: C.
Risk Phrases: 34 37

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Causes burns. Irritating to respiratory system.

Potential Health Effects

Eye:

May cause irreversible eye injury. Vapor or mist may cause

irritation and severe burns. Contact with liquid is corrosive to the eyes and causes severe burns. May cause painful sensitization to light.

Skin:

May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Contact with liquid is corrosive and causes severe burns and ulceration.

Ingestion:

May cause circulatory system failure. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.

Inhalation:

May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. Exposure to the mist and vapor may erode exposed teeth. Causes corrosive action on the mucous membranes.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. Repeated exposure may cause erosion of teeth.

SECTION 4 FIRST AID MEASURES

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Treat symptomatically and supportively.

SECTION 5 FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Not flammable, but reacts with most metals to form flammable hydrogen gas. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May ignite or explode on contact with steam or moist air. Containers may explode when heated.

Extinguishing Media:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime. Avoid runoff into storm sewers and ditches which lead to waterways. Provide ventilation. Do not get water inside containers. A vapor suppressing foam may be used to reduce vapors. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

SECTION 7 HANDLING AND STORAGE

Handling:

Use only in a well-ventilated area. Contents may develop pressure upon prolonged storage. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood. Use caution when opening. Keep from contact with moist air and steam.

Storage:

Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Do not store in metal containers.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate

ventilation to keep airborne concentrations low.
Personal Protective Equipment

Eyes:
Wear chemical goggles.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear liquid
Appearance: APHA: 10 max - almost colorless
Odor: strong odor - pungent odor
pH: <1
Vapor Pressure: 125 mbar @ 20 deg C
Viscosity: 1.9 mPas 15 deg
Boiling Point: 57 deg C @760 mmHg
Freezing/Melting Point: -35 deg C
Autoignition Temperature: Not available.
Flash Point: Not applicable.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature: 1782 deg C
Solubility: Miscible.
Specific Gravity/Density: 1.1800g/cm3
Molecular Formula: HCl
Molecular Weight: 36.45

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability:
Stable under normal temperatures and pressures.
Conditions to Avoid:
Mechanical shock, incompatible materials, excess heat, exposure to moist air or water.
Incompatibilities with Other Materials:

Metals, strong oxidizing agents, bases, acetic anhydride, alkali metals, aluminum, amines, copper, copper alloys, fluorine, sodium hydroxide, steel, sulfuric acid, vinyl acetate, potassium permanganate, cesium acetylene carbide, lithium silicide, rubidium acetylene carbide, rubidium carbide, sodium, aldehydes (e.g. acetaldehyde, acrolein, chloral hydrate, formaldehyde), caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide), epoxides (e.g. butyl glycidyl ether), water reactive substances (e.g. acetic anhydride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane), chlorosulfonic acid, oleum, methyl vinyl ether, perchloric acid, calcium phosphide, acetates, cesium carbide, carbides.

Hazardous Decomposition Products:

Hydrogen chloride, chlorine, hydrogen gas.

Hazardous Polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 7647-01-0: MW4025000

CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 7647-01-0: Inhalation, mouse: LC50 = 1108 ppm/1H; Inhalation, rat: LC50 = 3124 ppm/1H; Oral, rabbit: LD50 = 900 mg/kg.

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

Carcinogenicity:

Hydrochloric acid -

IARC: Group 3 carcinogen

Water -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Other:

See actual entry in RTECS for complete information.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Bluegill/Sunfish: 3.6 mg/l; 48H; Lethal (unspecified)

Other

Do not empty into drains.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

IATA

Shipping Name: HYDROCHLORIC ACID
Hazard Class: 8
UN Number: 1789
Packing Group: II

IMO

Shipping Name: HYDROCHLORIC ACID
Hazard Class: 8
UN Number: 1789
Packing Group: II

RID/ADR

Shipping Name: HYDROCHLORIC ACID
Dangerous Goods Code: 8(5B)
UN Number: 1789

SECTION 15 REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

R 37 Irritating to respiratory system.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately
with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek
medical advice immediately (show the label where
possible).

WGK (Water Danger/Protection)

CAS# 7647-01-0: 1

CAS# 7732-18-5: No information available.

United Kingdom Occupational Exposure Limits

CAS# 7647-01-0: OES-United Kingdom, TWA 1 ppm TWA; 2 mg/m3 TWA

CAS# 7647-01-0: OES-United Kingdom, STEL 5 ppm STEL; 8 mg/m3 STEL

CAS# 7647-01-0: OES-United Kingdom, STEL 5 ppm STEL; 8 mg/m3 STEL

Canada

CAS# 7647-01-0 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7647-01-0 is listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7647-01-0: OEL-AUSTRALIA:TWA 5 ppm (7 mg/m3)
OEL-AUSTRIA:TWA 5 ppm (7 mg/m3)
OEL-BELGIUM:STEL 5 ppm (7.7 mg/m3)
OEL-DENMARK:STEL 5 ppm (7 mg/m3)
OEL-FINLAND:STEL 5 ppm (7 mg/m3);Skin
OEL-FRANCE:STEL 5 ppm (7.5 mg/m3)
OEL-GERMANY:TWA 5 ppm (7 mg/m3)
OEL-HUNGARY:STEL 5 mg/m3
OEL-JAPAN:STEL 5 ppm (7.5 mg/m3)
OEL-THE NETHERLANDS:TWA 5 ppm (7 mg/m3)
OEL-THE PHILIPPINES:TWA 5 ppm (7 mg/m3)
OEL-POLAND:TWA 5 mg/m3
OEL-RUSSIA:STEL 5 ppm (5 mg/m3)
OEL-SWEDEN:STEL 5 ppm (8 mg/m3)
OEL-SWITZERLAND:TWA 5 ppm (7.5 mg/m3);STEL 10 ppm (15 mg/m3)
OEL-THAILAND:TWA 5 ppm (7 mg/m3)
OEL-TURKEY:TWA 5 ppm (7 mg/m3)
OEL-UNITED KINGDOM:TWA 5 ppm (7 mg/m3);STEL 5 ppm (7 mg/m3)
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL
TSCA

CAS# 7647-01-0 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.

SECTION 16 OTHER INFORMATION
