1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Acetyl chloride
Product Number: 000995
Brand: Fuka
Supplier: Sigma-Aldrich
3040 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-332-5832
Fax: +1 800-332-5032
Emergency Phone # (For both supplier and manufacturer): (514) 776-6555
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid, Harmful by ingestion, Corrosive

GHS Classification
Flammable liquids (Category 3)
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H402 Harmful to aquatic life.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Other hazards: Reacts violently with water.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: CaHgClO
Molecular Weight: 78.92 g/mol

Component | Concentration
--- | ---
Acetyl chloride | 75-38-5
EC-No. | 200-865-5
Index-No. | 607-211-00-5

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

5. FIREFIGHTING MEASURES

Conditions of flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

Suitable extinguishing media
Dry powder

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions: Carbon oxides
Hazardous decomposition products formed under fire conditions: Nature of decomposition products not known.
Hazardous decomposition products formed under fire conditions: Carbon oxides. Hydrogen chloride gas

Further information
Water-hydrates material. Ibrinating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evaluate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Flash back possible over considerable distance. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from water. Never allow product to get in contact with water during storage.
Hydrolyzes readily. Handle and store under inert gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14807) respirator cartridges as a backup to engineered controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CE (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Splash protection
Material: butyln-rubber
Minimum layer thickness: 0.3 mm
Break through time: > 30 min
Material tested: Eupecet Beta (Arochem Z577547, Sose M)
data source: KCI GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kci.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection
Tight-fitting safety goggles. Face shield (6-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as ANSI (US) or EN 166 (EU).

Skin and body protection
Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form: liquid, clear
Colour: colourless

Safety data
pH: no data available
Melting point/freezing point: no data available
Boiling point: 52 °C (126 °F) - lit.
Flash point: 5 °C (41 °F) - closed cup
Ignition temperature: 734 °C (1353 °F)
Autoignition temperature: no data available
Lower explosion limit: 7.2 % (V)
Upper explosion limit: 19 % (V)
Vapour pressure: 850.765 hPa (604.373 mmHg) at 20 °C (68 °F)
2.226.432 hPa (1.671.461 mmHg) at 50 °C (122 °F)
Density: 1.104 g/cm³ at 25 °C (77 °F)
Water solubility: no data available
Partition coefficient: n-octanol/water: no data available
Relative vapour density: 2.71 (Air = 1.0)
Odour: no data available
Odour "Threshold": no data available
Evaporation rate: no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Vapours may form explosive mixture with air.
Reacts violently with water.

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight. Exposure to moisture.

Materials to avoid
Water, Alcohols, Oxidizing agents, Strong bases

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: - Carbon oxides
Hazardous decomposition products formed under fire conditions: - Nature of decomposition products not known.
Hazardous decomposition products formed under fire conditions: - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral LD50
LD50 Oral - rat: 910 mg/kg
Remarks: Peripheral Nerve and Sensation: Spastic paralysis with or without sensory change, Behavioral: Excitement, Lungs, Thorax, or Respiration: Other changes.
Inhalation LC50
no data available
Dermal LD50
no data available
Other information on acute toxicity
no data available
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
no data available
Teratogenicity
no data available
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available
Aspiration hazard
no data available
Potential health effects
Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion: Harmful if swallowed.
Skin: Harmful if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Synergist effects
no data available
Additional Information
RTECS: AO839000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 42 mg/l - 96 h
Persistence and degradability
no data available
Bioaccumulative potential
no data available
Mobility in soil
no data available
PBT and vPvB assessment
no data available
Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1717
Class: 3 (B)
Proper shipping name: Acetyl chloride
Repackable Quantity (RG): 5000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No
15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Harmful by ingestion, Corrosive

SARA 202 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical component with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

Massachusetts Right To Know Components
- Acetyl chloride
  - CAS-No.: 79-36-5
  - Revision Date: 2010-06-02

Pennsylvania Right To Know Components
- Acetyl chloride
  - CAS-No.: 79-36-5
  - Revision Date: 2010-06-02

New Jersey Right To Know Components
- Acetyl chloride
  - CAS-No.: 79-36-5
  - Revision Date: 2010-06-02

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further Information
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