1-Chloroethyl chloroformate (cas 50893-53-3) MSDS

MSDS : 1-Chloroethyl Chloroformate, 99%
CAS : 50893-53-3
SYNONYMS : None.

Catalog of Chemical Suppliers, Buyers, Custom Synthesis Companies And Equipment Manufacturers
[ 1-Chloroethyl Chloroformate, 99% 50893-53-3 ]

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>50893-53-3</td>
<td>1-Chloroethyl chloroformate</td>
<td>99</td>
<td>256-834-2</td>
</tr>
</tbody>
</table>

Hazard Symbols: T C
Risk Phrases: 10 21/22 23 34

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Potential Health Effects
Eye:
Causes eye burns. Lachrymator (substance which increases the flow of tears). May cause chemical conjunctivitis and corneal damage.

Skin:
Causes skin burns. May cause cyanosis of the extremities. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.

Ingestion:
May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. Ingestion of large amounts may cause CNS depression. May cause systemic effects.

Inhalation:
Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause systemic effects. May cause burning sensation in the chest.

Chronic:
Effects may be delayed.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion:
If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation:
POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

**** 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. Vapors may form an explosive mixture with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Extinguishing Media:
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT get water inside containers. Do NOT use straight streams of water.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

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

Spills/Leaks:
Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Do not get water inside containers. A vapor suppressing foam may be used to reduce vapors. Approach spill from upwind.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Do not allow contact with water. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam. Do not breathe vapor. Use only with adequate ventilation.

Storage:

**** 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.

Exposure Limits
CAS# 50893-53-3:

Personal Protective Equipment

Eyes:
Wear chemical splash goggles and face shield.

Skin:
Wear appropriate protective gloves to prevent skin exposure.
Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
A respiratory protection program that meets OSHA’s 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Liquid
Color: colorless
Odor: chloroform-like
pH: Not available.
Vapor Pressure: 168 mm Hg @ 20 deg C
Viscosity: Not available.
Boiling Point: 118 - 119 deg C
Freezing/Melting Point: Not available.
Autoignition Temperature: Not available.
Flash Point: 40 deg C (104.00 deg F)
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.
Decomposition Temperature:
Solubility in water:
Specific Gravity/Density: 1.32 g/cm3
Molecular Formula: CICO2CH(Cl)CH3
Molecular Weight: 142.97

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:
Stable under normal temperatures and pressures. May decompose on exposure to moist air or water.
Conditions to Avoid:
Ignition sources, moisture, excess heat.
Incompatibilities with Other Materials:
Strong oxidizing agents, strong bases, alcohols, amines.
Hazardous Decomposition Products:
Hydrogen chloride, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Has not been reported

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 50893-53-3 unlisted.
LD50/LC50:
Not available.
Carcinogenicity:
1-Chloroethyl chloroformate -
Not listed by ACGIH, IARC, or NTP.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

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

**** SECTION 14 - TRANSPORT INFORMATION ****

IATA
Shipping Name: CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S
Hazard Class: 6.1 (3)
UN Number: 2742
Packing Group: II
IMO
Shipping Name: CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S
Hazard Class: 6.1 (3)
UN Number: 2742
Packing Group: II
RID/AD Shipping Name: CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S

Hazard Class: 6.1 (3)
UN Number: 2742
Packing group: II

**** SECTION 15 - REGULATORY INFORMATION ****

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: T C
Risk Phrases:
R 10 Flammable.
R 21/22 Harmful in contact with skin and if swallowed.
R 23 Toxic by inhalation.
R 34 Causes burns.
Safety Phrases:
S 16 Keep away from sources of ignition - No smoking.
S 25 Avoid contact with eyes.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
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# 50893-53-3: No information available.
Canada
None of the chemicals in this product are listed on the DSL/NDSL list.
CAS# 50893-53-3 is not listed on Canada's Ingredient Disclosure List.
US FEDERAL
TSCA
CAS# 50893-53-3 is not listed on the TSCA inventory.
It is for research and development use only.

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 6/08/1999 Revision #4 Date: 10/05/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.