1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Acryloyl chloride</th>
</tr>
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<tbody>
<tr>
<td>Product Number</td>
<td>A24109</td>
</tr>
<tr>
<td>Brand</td>
<td>Aldrich</td>
</tr>
<tr>
<td>Supplier</td>
<td>Sigma-Aldrich</td>
</tr>
<tr>
<td>Telephone</td>
<td>+1 800-325-5832</td>
</tr>
<tr>
<td>Fax</td>
<td>+1 800-325-5052</td>
</tr>
<tr>
<td>Emergency Phone #</td>
<td>(314) 776-6555</td>
</tr>
<tr>
<td>Preparation Information</td>
<td>Sigma-Aldrich Corporation</td>
</tr>
<tr>
<td></td>
<td>Product Safety - Americas Region</td>
</tr>
<tr>
<td></td>
<td>1-800-521-8956</td>
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</tbody>
</table>

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid, Highly toxic by inhalation, Corrosive

Other hazards which do not result in classification
Lachrymator. Reacts violently with water.

GHS Classification
Flammable liquids (Category 2)
Acute toxicity, Inhalation (Category 1)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word
Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 Wear respiratory 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 Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification
Health hazard: 3
Flammability: 3  
Physical hazards: 0  

NFPA Rating
Health hazard: 4  
Fire: 3  
Reactivity Hazard: 0  

Potential Health Effects
Inhalation: May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
Skin: May be harmful if absorbed through skin. Causes skin burns.  
Eyes: Causes eye burns.  
Ingestion: May be harmful if swallowed.  

3. COMPOSITION/INFORMATION ON INGREDIENTS
Synonyms: 2-Propenoyl chloride  
Formula: C₃H₃ClO  
Molecular Weight: 90.51 g/mol  

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
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<tbody>
<tr>
<td>Acryloyl chloride</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>814-68-6</td>
</tr>
<tr>
<td>EC-No.</td>
<td>212-399-0</td>
</tr>
</tbody>
</table>

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.  

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. 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.  

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

5. FIREFIGHTING MEASURES
Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.  

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, Hydrogen chloride gas  

Further information
Use water spray to cool unopened containers.  

6. ACCIDENTAL RELEASE MEASURES
Personal precautions
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate 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.

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).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. 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
Store in cool place. 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.

Recommended storage temperature: 2 - 8 °C
Light sensitive. Reacts violently with water.

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 14387) respirator cartridges as a backup to engineering 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 CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s 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.

Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (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
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form liquid
Colour no data available

Safety data
pH no data available
Melting 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.

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

Materials to avoid
Strong bases

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas
Other decomposition products - no data available

Contains the following stabiliser(s):
Phenothiazine (400 ppm)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
no data available

Inhalation LC50
LC50 Inhalation - mouse - 2 h - 92 mg/m³

Dermal LD50
no data available

Other information on acute toxicity
LD50 Intravenous - mouse - 180 mg/kg

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity

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 fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns.

Signs and Symptoms of Exposure
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Synergistic effects
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION
Toxicity
no data available

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
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: 3488  Class: 6.1 (8, 3)  Packing group: I
Proper shipping name: Toxic by inhalation liquid, flammable, corrosive, n.o.s. (Acryloyl chloride)
Marine pollutant: No
Poison Inhalation Hazard: Hazard zone A

IMDG
UN number: 3488  Class: 6.1 (3, 8)  Packing group: I
Proper shipping name: TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. (Acryloyl chloride)
Marine pollutant: No

IATA
UN number: 3488  Class: 6.1 (3, 8)
Proper shipping name: Toxic by inhalation liquid, flammable, corrosive, n.o.s. (Acryloyl chloride)
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Highly toxic by inhalation, Corrosive

SARA 302 Components
The following components are subject to reporting levels established by SARA Title III, Section 302:

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<th>CAS-No.</th>
<th>Revision Date</th>
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<td>1993-04-24</td>
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SARA 313 Components
SARA 313: This material does not contain any chemical components 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

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Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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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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