

Material Safety Data Sheet

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Version 1.5
According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

1 - Product and Company Information

Product Name	ACRYLOYL CHLORIDE, 98%
Product Number	549797
Company	Sigma-Aldrich Pty, Ltd Unit 2, 14 Anella Avenue Castle Hill NSW 1765 Australia
Technical Phone #	+61 2 9841 0555
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
ACRYLOYL CHLORIDE	814-68-6	212-399-0	None
Formula	C3H3ClO		
Molecular Weight	90.51 AMU		
Synonyms	Acrylic acid chloride * Acrylyl chloride * Chlorid kyseliny akrylove (Czech) * Propenoyl chloride * 2-Propenoyl chloride (9CI)		

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Highly flammable. Reacts violently with water. Very toxic by inhalation. Causes burns.

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is

conscious. Call a physician immediately. Do not induce vomiting.

5 - Fire Fighting Measures

CONDITIONS OF FLAMMABILITY

Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.

EXTINGUISHING MEDIA

Suitable: Carbon dioxide. Dry chemical powder.

Unsuitable: Do not use water.

SPECIAL RISKS

Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions.

Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat, sparks, and open flame.

Incompatible Materials: Do not allow contact with water
Store at -20°C

SPECIAL REQUIREMENTS: Light sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated

shoes. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

Special Protective Measures: Faceshield (8-inch minimum).

9 - Physical and Chemical Properties

Appearance	Physical State: Clear liquid Color: Slightly yellow	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	74 - 76 °C	760 mmHg
MP/MP Range	N/A	
Flash Point	14 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	1.114 g/cm ³	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	> 1 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Conditions to Avoid: Do not allow water to enter container because of violent reaction. Sensitive to light.

Materials to Avoid: Alcohols, Oxidizing agents, Strong bases.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Hydrogen chloride gas, Phosgene gas.

STABILIZERS PRESENT

Stabilized with 200ppm Phenothiazine

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: May occur

Hazardous Polymerization Reactions: Humidity, catalysts, sunlight, heat. Loss of inhibitor

11 - Toxicological Information

RTECS NUMBER: AT7350000

ACUTE TOXICITY

LC50
Inhalation
Mouse
92 mg/m³
2H

LD50
Intravenous
Mouse
180 MG/KG

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

ROUTE OF EXPOSURE

Skin Contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes burns. Lachrymator.
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.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 2929
Class: 6.1
PG: I
Proper Shipping Name: Toxic liquid, flammable, organic, n.o.s.

IMDG

UN#: 2929
Class: 6.1
PG: I
Subrisk: 3
Proper Shipping Name: TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S., POISON-INHALATION HAZARD, ZONE A
Marine Pollutant: No

Severe Marine Pollutant: No
Technical Name: Required

IATA

UN#: 2929
Class: 6.1
PG: I
Subrisk: 3
Proper Shipping Name: Toxic liquid, flammable,
organic, n.o.s.
Inhalation Packing Group I: Yes
Technical Name: Required

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: F T+

Highly Flammable. Very toxic.

R-PHRASES: 11 14 26 34

Highly flammable. Reacts violently with water. Very toxic by
inhalation. Causes burns.

S-PHRASES: 7/9 16 26 36/37/39 45 28

Keep container tightly closed and in well-ventilated place.
Keep away from sources of ignition - no smoking. In case of
contact with eyes, rinse immediately with plenty of water and
seek medical advice. Wear suitable protective clothing, gloves,
and eye/face protection. In case of accident or if you feel
unwell, seek medical advice immediately (show the label where
possible). After contact with skin, wash immediately with
plenty of water.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 2 (self-classification)

SWITZERLAND

SWISS POISON CLASS: 1

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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