

## Material Safety Data Sheet

Date Printed: 24/OCT/2004

Date Updated: 12/MAR/2004

Version 1.5

According to 91/155/EEC

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

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1 - Product and Company Information

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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
Fax	+61 2 9841 0500
Emergency Phone #	+61 2 9841 0566

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2 - Composition/Information on Ingredients

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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)		

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3 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Highly flammable. Reacts violently with water. Very toxic by inhalation. Causes burns.

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4 - First Aid Measures

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## 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.

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## 5 - Fire Fighting Measures

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### 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.

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## 6 - Accidental Release Measures

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### 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.

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## 7 - Handling and Storage

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### 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.

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## 8 - Exposure Controls / Personal Protection

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### 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).

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### 9 - Physical and Chemical Properties

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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/cm3	
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	

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### 10 - Stability and Reactivity

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#### 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

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### 11 - Toxicological Information

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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.

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## 12 - Ecological Information

No data available.

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## 13 - Disposal Considerations

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## 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.

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## 14 - Transport Information

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### 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

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#### 15 - Regulatory Information

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##### 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

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#### 16 - Other Information

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##### 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  
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