



**LEONID CHEMICALS PVT. LTD.,
BANGALORE**

An ISO-9001:2008 Certified Company

Quality Assurance Department

(CODE) DOCUMENT : WI

(CODE) SECTION : WI/SM

(DATE) : 01.04.2011



Issue : 02

Rev.: 00

Title: MATERIAL SAFETY DATA SHEET (MSDS): ACRYLOYL CHLORIDE

1 | Page of 1

SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Acryloyl chloride

Catalog Numbers: A422

Synonyms: 2-Propenoyl chloride

CAS-No. : 814-68-6

Company Information:

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SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 2)

Acute toxicity, Inhalation (Category 1)

Skin corrosion (Category 1B)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

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.



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2 | Page of 1

- 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.

Supplemental Hazard

Statements none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

R-phrase(s)

- R11 Highly flammable.
R14 Reacts violently with water.
R26 Very toxic by inhalation.
R34 Causes burns.

S-phrase(s)

- S 7/9 Keep container tightly closed and in a well-ventilated place.
S16 Keep away from sources of ignition - No smoking.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with plenty of water.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards

Lachrymator.

Reacts violently with water.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : 2-Propenoyl chloride
Formula : C3H3ClO
Molecular Weight : 90,51 g/mol

Component	Concentration
Acryloyl chloride	
CAS-No. 814-68-6	-
EC-No. 212-399-0	

SECTION 4: First aid measures



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3 | Page of 1

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

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.

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

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.

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

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.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.



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4 | Page of 1

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
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.
- 6.2 Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 6.3 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).
- 6.4 Reference to other sections**
For disposal see section 13.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling**
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
- 7.2 Conditions for safe storage, including any incompatibilities**
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. Store under inert gas. Reacts violently with water.
- 7.3 Specific end uses**
no data available

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters**
Components with workplace control parameters
- 8.2 Exposure controls**
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment



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5 | Page of 1

Eye/face 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 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

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).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) Appearance Form : liquid
Colour : light yellow
- b) Odour :no data available
- c) Odour Threshold :no data available
- d) pH :no data available
- e) Melting point/freezing point :no data available
- f) Initial boiling point and boiling range :72 - 76 °C - lit.
- g) Flash point :14 °C - closed cup
- h) Evaporation rate :no data available
- i) Flammability (solid, gas) :no data available
- j) Upper/lower flammability or



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6 | Page of 1

- explosive limits :no data available
- k) Vapour pressure :no data available
- l) Vapour density :3,63
- m) Relative density :1,114 g/cm³ at 25 °C, 1,119 g/cm³ at 20 °C
- n) Water solubility :no data available
- o) Partition coefficient:
noctanol/water :no data available
- p) Autoignition
temperature :no data available
- q) Decomposition
temperature :no data available
- r) Viscosity :no data available
- s) Explosive properties :no data available
- t) Oxidizing properties :no data available

9.2 Other safety information
no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

Contains the following stabiliser(s):

Phenothiazine (0,05 %)

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Strong bases

10.6 Hazardous decomposition products

Other decomposition products - no data available

SECTION 11: Toxicological information

1.1 Information on toxicological effects

Acute toxicity

no data available

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



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7 | Page of 1

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.

Reproductive toxicity

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

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. Causes burns.

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.

Additional Information

RTECS: AT7350000

SECTION 12: Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability



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8 | Page of 1

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3488 IMDG: 3488 IATA: 3488

14.2 UN proper shipping name

ADR/RID: TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. (Acryloyl chloride)

IMDG: TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. (Acryloyl chloride)

IATA: Toxic by inhalation liquid, flammable, corrosive, n.o.s. (Acryloyl chloride)

Passenger Aircraft: Not permitted for transport

Cargo Aircraft: Not permitted for transport

Special Provisions: "Keep away from heat" label required.

14.3 Transport hazard class(es)

ADR/RID: 6.1 (3, 8) IMDG: 6.1 (3, 8) IATA: 6.1 (3, 8)

14.4 Packaging group

ADR/RID: I IMDG: I IATA: -



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Title: MATERIAL SAFETY DATA SHEET (MSDS): ACRYLOYL CHLORIDE

9 | Page of 1

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

no data available

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment

no data available

SECTION 16 - ADDITIONAL INFORMATION

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 event shall Leonid Chemicals Pvt. Ltd. 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 Leonid Chemicals Pvt. Ltd. has been advised of the possibility of such damages.

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