

# FramoChem

A VanDeMark Company

## SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:

**Acryloyl chloride**

Synonym: Propenoic acid chloride  
CAS number: 814-68-6  
EU number: 212-399-0  
Registration number: no data available.

1.2. 1.2. Relevant identified uses of the substance and uses advised against:

Organic synthesis intermediate for industrial use.

1.3. Details of the supplier of the safety data sheet:

**FRAMOCHEM FRENCH-HUNGARIAN FINE CHEMICALS LTD.**  
3700 Kazincbarcika,  
Szerviz str. 5., POB. 504  
Telephone: +36 (48) 311-991  
Fax: +36 (48) 512-162

1.3.1. Responsible person:

-

E-mail:

[info@framochem.hu](mailto:info@framochem.hu)

1.4. Emergency telephone number:

**Public Toxicological Health Service (ETTSZ)**  
1096 Budapest, Nagyváradi tér 2.  
Tel.: 06 1 476 6464, 06 80 201 199 (0-24 h)

### SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance:

Classification according to Regulation 1272/2008/EC (CLP):

Flam. Liq. 2 - H225  
Acute Tox. 3 (oral) - H301  
Acute Tox. 3 (dermal) - H311  
Skin Corr. 1A - H314  
Acute Tox. 1 (inhalative) - H330  
Aquatic Acute 1 - H400

Warning **H statements:**

**H225** - Highly flammable liquid and vapour.  
**H301** - Toxic if swallowed.  
**H311** - Toxic in contact with skin.  
**H314** - Causes severe skin burns and eye damage.  
**H330** - Fatal if inhaled.  
**H400** - Very toxic to aquatic life.

Classification according to Directive 67/548/EEC:

F; Highly flammable - R11  
T+; Very toxic - R26  
T; Toxic - R24/25  
N; Dangerous for the environment - R50  
R14  
C; Corrosive - R35

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**R phrases** referring to the hazards/risks:

- R 11** - Highly flammable.
- R 14** - Reacts violently with water.
- R 24/25** - Toxic in contact with skin and if swallowed.
- R 26** - Very toxic by inhalation
- R 35** - Causes severe burns.
- R 50** - Very toxic to aquatic organisms.

## 2.2. Label elements

IUPAC name: Acryloyl chloride  
CAS number: 814-68-6  
EU number: 212-399-0



**DANGER**

Warning **H statements**:

- H225** - Highly flammable liquid and vapour.
- H301** - Toxic if swallowed.
- H311** - Toxic in contact with skin.
- H314** - Causes severe skin burns and eye damage.
- H330** - Fatal if inhaled.
- H400** - Very toxic to aquatic life.

**EUH 014** - Reacts violently with water.

Precautionary **P statements**:

- P210** - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
- P233** - Keep container tightly closed.
- P260** - Do not breathe gas/mist/vapours/spray.
- P273** - Avoid release to the environment.
- P280** - Wear protective gloves/protective clothing/eye protection/face 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.
- P370 + P378** - In case of fire: Use sand, powder and carbon dioxide for extinction.
- P391** - Collect spillage.

## 2.3. Other hazards:

The substance does not meet the PBT criteria according to Annex XIII of Regulation 1907/2006/EC.  
Information concerning specific hazards for human and environment: see Section 11.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

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IUPAC name: Acryloyl chloride  
CAS number: 814-68-6  
EU number: 212-399-0  
Synonym: Propenoic acid chloride  
Formula: C<sub>3</sub>H<sub>3</sub>ClO  
Molar mass: 90.5  
Purity: ≥ 99

Note: Stabilized with 200 ppm Phenothiazol or 23-29 ppm Chlorpromazine.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures:

**GENERAL INFORMATION:** Obtain immediate medical attention and show him the label!

#### IN CASE OF INGESTION:

Measures:

- Obtain immediate medical attention and show him the label.
- Place the victim into comfortable position.
- Do not give the victim anything to eat or drink, and do not induce vomiting if the victim is unconscious.
- Flush the mouth of the victim with clean water.
- If the victim is conscious, give him 2-4 glasses of milk or water to drink.

#### IN CASE OF INHALATION:

Measures:

- Take the victim into fresh air, loosen his clothes and let him rest.
- If the breathing is laboured, give him oxygen.
- If the breathing has stopped, give artificial respiration.
- Do not apply mouth-to-mouth resuscitation.
- Obtain immediate medical attention and show him the label.

#### IN CASE OF SKIN CONTACT:

Measures:

- Immediately remove the contaminated clothes.
- Immediately wash the contaminated area with plenty of flowing water and soap (for 15 minutes).
- If symptoms occur, obtain immediate medical attention and show him the label.

#### IN CASE OF EYE CONTACT:

Measures:

- Flush with plenty of flowing water for 15 minutes holding eyelids apart (for at least 15 minutes).
- Obtain immediate medical attention and show him the label.

### 4.2. Most important symptoms and effects, both acute and delayed:

See section 11 for information on health effects and symptoms.

### 4.3. Indication of any immediate medical attention and special treatment needed:

See section 11 for information on health effects and symptoms.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media:

#### 5.1.1. Suitable extinguishing media:

Alcoholic foam, dry chemical or carbon dioxide.

#### 5.1.2. Unsuitable extinguishing media:

Water.

### 5.2. Special hazards arising from the substance or mixture:

In case of fire, smoke and other combustion products (hydrochloric acid, carbon monoxide, carbon dioxide) may be formed, the inhalation of such combustion products can have serious adverse effects on health.

### 5.3. Advise for fire fighters

Wear appropriate full protective clothing and self-contained breathing apparatus (self-rescue breathing apparatus). These means can protect from the skin and eye contact and from the inhalation of the hazardous gases and smoke.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures:

#### 6.1.1 For non-emergency personnel:

Keep unprotected people away, allow only well trained experts wearing suitable protective clothing to abide in the field of accident.

- 6.1.2. For emergency responders:  
 Evacuate the unauthorized persons for the place of the accident. Remove all ignition sources from the affected area. Close the designated area. Ensure adequate ventilation.
- 6.2. Environmental precautions:  
 Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow the substance and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.
- 6.3. Methods and material for containment and cleaning up:  
 Collect the spilled material with inert, non-combustible, mineral absorbent (sand, earth, perlite), then place into a suitable, closed, properly labelled chemical waste container for disposal. During disposal wear suitable personal protective equipment.
- 6.4. Reference to other sections:  
 For further and detailed information see section 8 and 13.

#### SECTION 7: HANDLING AND STORAGE

- 7.1. Precautions for safe handling:  
 Observe conventional hygiene precautions.  
 Do not breathe the vapour, mist, gas, and aerosol.  
 Avoid contact with eyes, skin and clothing.  
 Technical measures:  
 Ensure adequate ventilation / local extraction.  
 Precautions against fire and explosion:  
 Use spark- and explosion proof equipment.
- 7.2. Conditions for safe storage, including any incompatibilities:  
 Technical measures and storage condition:  
 Keep in original, tightly closed and properly labelled container.  
 The place of storage has to be properly ventilated and cleanable.  
 Store separate from ignition sources.  
 Keep in dry place.  
 Sensitive for humidity.  
 Ensure adequate ventilation.  
 Storage temperature: < 0 °C.  
 Follow all instructions on the label.  
 Incompatible materials: water, alcohols, amines, bases, acids.  
 Packaging material: Metal container lined with polyethylene. Do not use metal containers without lining.
- 7.3. Specific end use(s):  
 No specific instructions available.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure limit values:  
 The substance is not regulated with exposure limit value.

DNEL		Routes of exposure	Exposure frequency	Remarks:
Worker	Consumer			
no data available	no data available	Dermal	Short term (acute) Long term (repeated)	no data available
no data available	no data available	Inhalative	Short term (acute) Long term (repeated)	no data available
no data available	no data available	Oral	Short term (acute) Long term (repeated)	no data available

PNEC			Exposure frequency:	Remarks:
Water	Soil	Air		
no data available	no data available	no data available	Short term (single use) Long term (continuous)	no data available

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no data available	no data available	no data available	Short term (single use) Long term (continuous)	no data available
no data available	no data available	no data available	Short term (single use) Long term (continuous)	no data available

8.2. **Exposure controls:**

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1 **Appropriate engineering controls**

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.

Ensure adequate ventilation, especially in closed areas.

Do not eat or smoke during the processing.

Do not breathe the vapour, mist, gas, and aerosol.

Wash and hand wash thoroughly after work.

In the vicinity of the workplace safety shower and eye wash fountain has to be installed.

8.2.2. **Individual protection measures, such as personal protective equipment:**

1. Eye/face protection: use appropriate protective glasses/protective mask according to EN 166.
2. Skin protection:
  - a. Hand protection: use appropriate protective gloves according to EN 374.
  - b. Other: use appropriate, acid resistant protective clothes according to EN ISO 6529.
3. Respiratory protection: use adequate respirator (for organic vapours) according to EN 136, EN 141.
4. Thermal hazard: None known.

8.2.3. **Environmental exposure controls:**

No special measures required.

**The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.**

**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

9.1. **Information on basic physical and chemical properties:**

Parameter		Test method:	Remarks:
1. <b>Appearance:</b>	slightly pinkish liquid		
2. <b>Odour:</b>	pungent		
3. <b>Odour threshold:</b>	no data available		
4. <b>pH value:</b>	not applicable		
5. <b>Melting point/ freezing point:</b>	no data available		
6. <b>Initial boiling point/boiling range:</b>	75 °C		
7. <b>Flash point:</b>	-4 °C	NFT 60-103	
8. <b>Evaporation rate:</b>	no data available		
9. <b>Flammability:</b>	no data available		
10. <b>Upper/lower flammability or explosive limits:</b>	no data available		
11. <b>Vapour pressure:</b>	106, 6 x 10 <sup>2</sup> Pa (20 °C); 400 x 10 <sup>2</sup> Pa (40°C)		
12. <b>Vapour density:</b>	3,1	air = 1	
13. <b>Relative density:</b>	no data available		
14. <b>Solubility(ies):</b>	Hydrolyse on contact with water; well soluble in common solvents.		
15. <b>Partition coefficient: n-octanol/water:</b>	not applicable		
16. <b>Self-ignition temperature:</b>	no data available		
17. <b>Degradation temperature:</b>	140 °C	ATD	
18. <b>Viscosity:</b>	no data available		

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19. Explosive properties: no data available  
20. Oxidizing properties: no data available  
9.2. Other information:  
Density (20 °C): 1,113 g/cm<sup>3</sup>

## SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:  
Reacts violently with water.  
10.2. Chemical stability:  
Decomposes and polymerizes due to heat.  
Not stable under normal conditions.  
Note: Stabilized with 200 ppm Phenothiazol or 23-29 ppm Chlorpromazine.  
10.3. Possibility of hazardous reactions:  
Reacts violently with water.  
10.4. Conditions to avoid:  
Contact with water. Keep away from heat, sparks, and open flame.  
10.5. Incompatible materials:  
Strong bases, water, alcohols and amines.  
10.6. Hazardous decomposition products:  
Hydrochloric acid, carbon monoxide, carbon dioxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1. Information on toxicological effects:  
Acute toxicity: toxic if swallowed. Toxic in contact with skin. Fatal if inhaled.  
Skin corrosion/irritation: causes severe burns.  
Serious eye damage/eye irritation: causes serious eye damage.  
Respiratory or skin sensitisation: none known.  
Germ cell mutagenicity: none known.  
Carcinogenicity: none known.  
Reproductive toxicity: none known.  
STOT-single exposure: none known.  
STOT-repeated exposure: none known.  
Aspiration hazard: none known.  
11.1.1. For substances subject to registration, brief summaries of the information derived from the test conducted:  
No data available.  
11.1.2. Relevant toxicological properties of the hazardous substances:  
LD50 (oral, rat): 192 mg/kg (calculated)  
LD50 (dermal, rabbit): 200 mg/kg (calculated)  
11.1.3. Information on likely routes of exposure:  
Ingestion, inhalation, skin contact, eye contact.  
11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:  
**Acute effects:**  
Corrosive, may cause burning.  
Ingestion: Toxic if swallowed. Causes burns.  
Inhalation: Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
Skin contact: Toxic if absorbed through skin. Causes serious burns on skin.  
Eye contact: Causes eye burns.  
11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:  
Toxic if swallowed.  
Toxic in contact with skin.  
Causes severe skin burns and eye damage.  
Fatal if inhaled.  
11.1.6. Interactive effects:  
No data available.  
11.1.7. Absence of specific data:  
No information.

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- 11.1.8. Other information:  
No data available.

## SECTION 12: ECOLOGICAL INFORMATION

- 12.1. Toxicity:  
Very toxic to aquatic life.  
LC<sub>50</sub> (inhalative, mouse): 92 mg/m<sup>3</sup>/2h;  
Toxic for fish and Daphnia, very toxic for algae.
- 12.2. Persistence and degradability  
No data available.
- 12.3. Bioaccumulation potential:  
No data available.
- 12.4. Mobility in soil  
During hydrolysis it decomposes into hydrochloric acid and acryloyl which are dispersed in the water.
- 12.5. Results of PBT and vPvB assessment  
This substance does not meet the criteria of PBT or vPvB.
- 12.6. Other adverse effects:  
No data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1. Waste treatment methods:  
Disposal according to the local regulations.
- 13.1.1. Information regarding the disposal of the product:  
No special recommendation from the manufacturer.  
The product can be incinerated in a chemical incinerator equipped with an afterburner and scrubber.  
European Waste Code:  
No appropriate EWC code can be given for the substance, since the identification of the proper code can be done with the method of use defined by the user of the substance. The European waste code number has to be determined after a discussion with a specialist dealing with waste disposal.
- 13.1.2. Information regarding the disposal of the packaging:  
Dispose according to the relevant regulations. The contaminated packaging should be cleaned with alkaline solution.
- 13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:  
None known.
- 13.1.4. Sewage disposal:  
None known.
- 13.1.5. Special precautions for any recommended waste treatment:  
No data available.

## SECTION 14: TRANSPORT INFORMATION

- 14.1. UN Number:  
3488
- 14.2. UN proper shipping name:  
TOXIC BY INHALATION LIQUID, FLAMMABLE. CORROSIVE, N.O.S. (Acryloyl chloride)
- 14.3. Transport hazard class(es)  
ADR/RID: 6.1. TFC  
IMDG: 6.1  
IATA: -
- 14.4. Packaging group  
ADR/RID: I  
IMDG: I  
IATA: -
- 14.5. Environmental hazard  
ADR/RID: yes  
IMDG: yes  
IATA: -
- 14.6. Special precautions for user:  
IATA: Air transport: FORBIDDEN.
- 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:  
Not applicable.

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## SECTION 15: REGULATORY INFORMATION

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

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

### 15.2. Chemical safety assessment: no information available.

## SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet:

The safety data sheet has been revised according to Regulation 453/2010/EU (Section 1-16).

The classification has been amended according to Regulation 1272/2008/EC (CLP) and its amendments.

Full text of the abbreviations in the safety data sheet:

DNEL: Derived no effect level. PNEC: Predicted no effect concentration. CMR effects: carcinogenicity, mutagenicity and toxicity for reproduction. PBT: Persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative. n.d.: not defined. n.a.: not applicable.

Data sources: n.d

Relevant R-Phrases (number and full text) of Section 2 and 3:

**R 11** - Highly flammable.

**R 14** - Reacts violently with water.

**R 24/25** - Toxic in contact with skin and if swallowed.

**R 26** - Very toxic by inhalation

**R 35** - Causes severe burns.

**R 50** - Very toxic to aquatic organisms.

Relevant H-Phrases (number and full text) of Section 2 and 3:

**H225** - Highly flammable liquid and vapour.

**H301** - Toxic if swallowed.

**H311** - Toxic in contact with skin.

**H314** - Causes severe skin burns and eye damage.

**H330** - Fatal if inhaled.

**H400** - Very toxic to aquatic life.

**EUH 014** - Reacts violently with water.

Training instructions: n.d.

This safety data sheet had been prepared on the basis of information provided by the manufacturer. The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required. Since the conditions or the handling, the storage and the disposal of this product are beyond the control of the manufacturer, the distributor or the preparer of this SDS, no warranty, expressed or implied, regarding the product described in this SDS shall be created or inferred by any statement in this SDS. No responsibility is assumed regarding the accuracy, completeness or suitability of all or any of the information contained herein or the results to be obtained from the use thereof at the time of use. In no way shall the manufacturer, the distributor or the preparer of the be liable for any claims, losses or damages of third parties, personal injury, property damage, lost profits or any special, direct, indirect, incidental, consequential or exemplary damages resulting from the use of or reliance upon such information. Users are cautioned to determine the appropriateness and applicability of the above information to their



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particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by: ToxInfo Kft.

Professional help regarding the explanation of the safety data sheet:  
+36 70 335 8480; msds@msds-europe.com

Download of safety data sheet:

