# Acrylic acid (cas 79-10-7) MSDS

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifiers

<table>
<thead>
<tr>
<th>Product name</th>
<th>Acrylic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>147230</td>
</tr>
<tr>
<td>Brand</td>
<td>Anonymous</td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-061-00-8</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>79-10-7</td>
</tr>
</tbody>
</table>

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

- **Identified uses**: Laboratory chemicals, Manufacture of substances
- **Uses advised against**: None

## 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 3)
- Acute toxicity, Oral (Category 4)
- Acute toxicity, Inhalation (Category 4)
- Acute toxicity, Dermal (Category 4)
- Skin corrosion (Category 1A)
- Specific target organ toxicity - single exposure (Category 3)
- Acute aquatic toxicity (Category 1)

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

- Flammable. Causes severe burns. Harmful by inhalation, in contact with skin and if swallowed. Very toxic to aquatic organisms.

### 2.2 Label elements

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

#### Pictogram

- Flammable liquid and vapour.
- Harmful if swallowed, in contact with skin or if inhaled
- Causes severe skin burns and eye damage.
- May cause respiratory irritation.
- Very toxic to aquatic life.

#### Hazard statement(s)

- H26: Flammable liquid and vapour.
- H302 + H312 + H332: Harmful if swallowed, in contact with skin or if inhaled.
- H314: Causes severe skin burns and eye damage.
- H335: May cause respiratory irritation.
- H400: Very toxic to aquatic life.

#### Precautionary statement(s)

- P261: Avoid breathing vapours.
- 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.

**Supplemental Hazard Statements**

- None

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

#### Hazard symbol(s)

- **R-phrase(s)**
  - R10: Flammable.
  - R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
  - R35: Causes severe burns.
  - R50: Very toxic to aquatic organisms.

- **S-phrase(s)**
  - S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrylic acid</td>
<td></td>
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<tr>
<td>CAS-No.</td>
<td>79-10-7</td>
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<tr>
<td>EC-No.</td>
<td>201-177-9</td>
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<td>Index-No.</td>
<td>607-061-00-8</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

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. 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

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

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.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. 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. Discharge into the environment must be avoided.

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.
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.

7.3 **Specific end uses**
no data available

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 **Control parameters**

Components with workplace control parameters

8.2 **Exposure controls**

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

**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.

**Immersion protection**
Material: butyl-rubber
Minimum layer thickness: 0,3 mm
Break through time: > 480 min
Material tested:Butoject? (Anonymous Z677647, Size M)

**Splash protection**
Material: Nitrile rubber
Minimum layer thickness: 0,2 mm
Break through time: > 30 min
Material tested:Dermatril? P (Anonymous Z677388, Size M)

**Test data sources:** KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de,
test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**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).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 **Information on basic physical and chemical properties**
a) Appearance  Form: liquid, clear
    Colour: colourless
b) Odour  Stench.
c) Odour Threshold  no data available
d) pH  1,0 - 2 at 500 g/l
e) Melting point/freezing point  Melting point/range: 13 °C - lit.
f) Initial boiling point and boiling range  139 °C - lit.
g) Flash point  46 °C - closed cup
h) Evaporation rate  no data available
i) Flammability (solid, gas)  no data available
j) Upper/lower flammability or explosive limits  Upper explosion limit: 13,7 % (V)  
   Lower explosion limit: 2 % (V)
k) Vapour pressure  5 hPa at 20 °C
               53 hPa at 60 °C
l) Vapour density  2,49 - (Air = 1.0)
m) Relative density  1,051 g/cm3 at 25 °C
n) Water solubility  completely miscible
o) Partition coefficient: n-octanol/water  log Pow: 0,46
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
    Surface tension  28,1 mN/m at 30 °C

10. STABILITY AND REACTIVITY
10.1 Reactivity  no data available
10.2 Chemical stability  no data available
    Contains the following stabiliser(s):
    Mequinol (>=0,018 - <=0,02 %)
10.3 Possibility of hazardous reactions
    Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials.
    Polymerisation can occur.
10.4 Conditions to avoid
    Heat, flames and sparks.
10.5 Incompatible materials
    Strong oxidizing agents, Strong bases, Oxygen, Polymerizing initiators, Peroxides
10.6 Hazardous decomposition products
    Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
    Acute toxicity
    LD50 Oral - mouse - 830 mg/kg
    LC50 Inhalation - rat - 4 h - > 5.100 mg/m3
    LD50 Dermal - rabbit - > 2.000 mg/kg
Skin corrosion/irritation
Skin - rabbit - Severe skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization
guinea pig - Did not cause sensitization on laboratory animals.

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Acrylic acid)

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

<table>
<thead>
<tr>
<th>Mode of Exposure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Causes respiratory tract irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed. Causes burns.</td>
</tr>
<tr>
<td>Skin</td>
<td>May be harmful if absorbed through skin. Causes skin burns.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Causes eye burns.</td>
</tr>
</tbody>
</table>

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: AS4375000

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 27 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 95 mg/l - 48 h

Toxicity to algae
EC50 - Desmodesmus subspicatus (green algae) - 0,04 mg/l - 96 h

12.2 Persistence and degradability

Biodegradability
Biotic/Aerobic - Exposure time 28 d
Result: 100 % - Readily biodegradable.

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
Very toxic to aquatic life.

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.
14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 2218
IMDG: 2218
IATA: 2218

14.2 UN proper shipping name
ADR/RID: ACRYLIC ACID, STABILIZED
IMDG: ACRYLIC ACID, STABILIZED
IATA: Acrylic acid, stabilized

14.3 Transport hazard class(es)
ADR/RID: 8 (3)
IMDG: 8 (3)
IATA: 8 (3)

14.4 Packaging group
ADR/RID: II
IMDG: II
IATA: II

14.5 Environmental hazards
ADR/RID: yes
IMDG Marine pollutant: yes
IATA: no

14.6 Special precautions for user
no data available

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

16. OTHER INFORMATION

Further information
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. guidechem 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.

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