SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
   Product name: Acrylic Acid
   CAS-No.: 79-10-7

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
   Company: Central Drug House (P) Ltd
   7/28 Vardaan House
   New Delhi-10002
   INDIA
   Telephone: +91 11 49404040
   Email: care@cdhfinechemical.com

1.4 Emergency telephone number
   Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification according to Regulation (EC) No 1272/2008
   Flammable liquids (Category 3), H226
   Acute toxicity, Oral (Category 4), H302
   Acute toxicity, Inhalation (Category 4), H332
   Acute toxicity, Dermal (Category 4), H312
   Skin corrosion (Category 1A), H314
   Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
   Acute aquatic toxicity (Category 1), H400

   For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements
   Labelling according Regulation (EC) No 1272/2008
   Pictogram

   Signal word: Danger
   Flammable, Corrosive to metals, Skin Irritation, Respiratory irritation
Hazard statement(s)
H226 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)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements
none

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
Formula : C3H4O2
Molecular weight : 72.06 g/mol
CAS-No. : 79-10-7
EC-No. : 201-177-9
Index-No. : 607-061-00-8

Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
Acrylic acid Flam. Liq. 3; Acute Tox. 4; <= 100 %
    CAS-No. 79-10-7
    EC-No. 201-177-9
    Index-No. 607-061-00-8
    Skin Corr. 1A; Aquatic Acute 1; H226, H302, H332, H312, H314, H400
    Concentration limits:
    >= 1 %: STOT SE 3, H335;
    M-Factor - Aquatic Acute: 1

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 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
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides
Flash back possible over considerable distance.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, 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. For personal protection see section 8.

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.

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. For precautions see section 2.2.

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. Hygroscopic. Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
SECTION 8: Exposure controls/personal protection

8.1 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.

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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 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
### Flammability (solid, gas)
No data available

### Upper/lower flammability or explosive limits
- **Upper explosion limit:** 13.7 % (V)
- **Lower explosion limit:** 2 % (V)

### Vapour pressure
- 4 mmHg at 20 °C
- 40 mmHg at 60 °C

### Vapour density
2.49 - (Air = 1.0)

### Relative density
1.051 g/cm³ at 25 °C

### Water solubility
Completely miscible

### Partition coefficient: n-octanol/water
log Pow: 0.46

### Auto-ignition temperature
No data available

### Decomposition temperature
No data available

### Viscosity
No data available

### Explosive properties
No data available

### Oxidizing properties
No data available

### Other safety information
- **Surface tension:** 28.1 mN/m at 30 °C
- **Relative vapour density:** 2.49 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### Reactivity
No data available

### Chemical stability
Stable under recommended storage conditions.

### Possibility of hazardous reactions
Reacts violently in contact with acids, amines, driers, polymerisation accelerators and easily oxidized materials. Polymerisation can occur.

### Conditions to avoid
Heat, flames and sparks.

### Incompatible materials
- Strong oxidizing agents
- Strong bases
- Oxygen
- Polymerizing initiators
- Peroxides

### Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

### Other decomposition products
No data available

### In the event of fire: see section 5

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity
- **LD50 Oral - Rat:** 357 mg/kg (Acrylic acid)
- **LC50 Inhalation - Rat:** male and female - 4 h - > 5.1 mg/l (Acrylic acid)
  (OECD Test Guideline 403)
**Skin corrosion/irritation**
Skin - Rabbit (Acrylic acid)
Result: Causes severe burns. - 3 min
(OECD Test Guideline 404)

**Serious eye damage/eye irritation**
Eyes - Rabbit (Acrylic acid)
Result: Corrosive - 18 - 24 h

**Respiratory or skin sensitisation**
- Guinea pig (Acrylic acid)
Did not cause sensitisation on laboratory animals.

**Germ cell mutagenicity**
Laboratory experiments have shown mutagenic effects. (Acrylic acid)
Hamster (Acrylic acid) ovary
Result: negative
(Acrylic acid)
Mouse - male and female
Result: negative

**Carcinogenicity**
This product is or contains a component that is not classifiable as to its classification. (Acrylic acid)
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Acrylic acid)

**Reproductive toxicity**
No data available (Acrylic acid)

**Specific target organ toxicity - single exposure**
No data available (Acrylic acid)

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available (Acrylic acid)

**Additional Information**
Repeated dose toxicity - Rat - male and female - Oral - No observed adverse effect level - 83 mg/kg -
Lowest observed adverse effect level - 250 mg/kg (Acrylic acid)
RTECS: AS4375000

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., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Acrylic acid)

Liver - Irregularities - Based on Human Evidence (Acrylic acid)

**SECTION 12: Ecological information**

12.1 **Toxicity**
Toxicity to algae
static test EC50 - Desmodesmus subspicatus (green algae) - 0.205 mg/l - 72 h (Acrylic acid)

Toxicity to bacteria

12.2 **Persistence and degradability**
Biodegradability aerobic - Exposure time 28 d (Acrylic acid)
Result: 80 - 90 % - Readily biodegradable (OECD Test Guideline 301D)
12.3 **Bioaccumulative potential**  
No data available

12.4 **Mobility in soil**  
No data available (Acrylic acid)

12.5 **Results of PBT and vPvB assessment**  
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 **Other adverse effects**  
Very toxic to aquatic life.  
No data available

SECTION 13: Disposal considerations

13.1 **Waste treatment methods**

**Product**  
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**  
Dispose of as unused product.

SECTION 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: no  
IMDG: Marine pollutant: yes  
IATA: no

14.6 **Special precautions for user**  
No data available

SECTION 15: Regulatory information

15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 **Chemical safety assessment**  
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

**Full text of H-Statements referred to under sections 2 and 3.**

H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H302 + H312 + Harmful if swallowed, in contact with skin or if inhaled  
H332  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.
H332    Harmful if inhaled.
H335    May cause respiratory irritation.
H400    Very toxic to aquatic life.

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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.