

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	: Glacial Acrylic Acid
Chemical Name	: Acrylic Acid
CAS No.	: 79-10-7
Supplier	: TASNEE
Contact	: BUChemicalsMarketing@tasnee.com
Address	: Business Gate, Building # C3, King Khalid Int'l Airport Road, P.O. Box 26707, Riyadh 11496, Kingdom of Saudi Arabia
Emergency Tel. Contact at KSA	: +966 (13) 359 7111
Non-emergency Tel.	: +966 (11) 222 2205

2. HAZARD IDENTIFICATION

2.1 Hazard Classification

According to Regulation (EU) 1272/2008

Flammable liquids Category 3	: H226 Flammable liquid and vapour
Oral Acute toxicity - Category 4	: H302 Harmful if swallowed.
Inhalation Acute toxicity - Category 4	: H332 Harmful if inhaled.
Skin corrosion - Sub-category 1A	: H314 Causes severe skin burns and eye damage.
Serious eye damage - Category 1	: H318 Causes serious eye damage.
Specific target organ toxicity - single exposure - Category 3	: H335 May cause respiratory irritation.
Short-term (acute) aquatic hazard - Category 1	: H400 Very toxic to aquatic life.
Long-term (chronic) aquatic hazard - Category 2	: H411 Toxic to aquatic life with long lasting effects.

2.2 LABELLING

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS] :
Hazard pictograms



Signal word: Danger

Precautionary Statements

P210	: Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P273	: Avoid release to the environment.
P280	: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P305 + P351 + P338 +P310

: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304 + P340 + P310

: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER and/or doctor.

P370 + P378

: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P391

: Collect spillage.

Supplemental information
EUH208

: Contains: 2-Propenoic acid, 2-carboxyethyl ester. May produce an allergic reaction.

2.3 Other Hazards

No data Available

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Chemical Listing No.	Content (W/W)
Glacial Acrylic Acid	CAS-No. 79-10-7	≥ 99.0%
Other Ester Adducts	Not required	≤ 1.0%
Methoxyphenol	150-76-5	≤ 220 ppm

4. FIRST-AID MEASURES

4.1 Description of First Aid Measures

Inhalation

: Move to fresh air. Oxygen or artificial respiration if needed. Call a physician immediately.

Skin contact

: IMMEDIATELY get under a safety shower. Remove contaminated clothing. Wash off with soap and water. Immediate medical attention is required. Wash contaminated clothing before reuse.

Eye contact

: Rinse immediately with plenty of water for at least 15 minutes. Call a physician immediately

Ingestion

: Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician immediately. NOTE: This is a corrosive material. Do not administer any other first aid before obtaining the advice of a physician

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

No information available.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

No information available.

Notes to Physician: Treat acrylic acid as a corrosive and immediately dilute with water for 15 minutes upon contact with eyes or skin. (Effects are similar to hydrochloric acid). Observation of individuals with significant inhalation exposure is necessary because of possible delayed pulmonary edema. Treatment is supportive. Ingestion of acrylic acid requires a surgical evaluation for esophageal damage.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media:

Water spray

Dry powder

Foam

Alcohol-resistant foam

5.2 Special Hazards Arising from the Substance or Mixture Specific Hazards During Firefighting:
Heat can cause polymerization. Heated containers can explode.

5.3 Advice for Firefighters

Special Protective Equipment for Firefighters:

Wear self-contained breathing apparatus and protective suit.

Further Information:

Explosion Hazard:

Fight advanced fires from a protected location. Cool containers / tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment.

Material is corrosive. If exposed to material as-is or mixed with run-off water during firefighting, IMMEDIATELY remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for actions to follow

6.2 Environmental Precautions

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Do not allow material to contaminate ground water system.

6.3 Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition.

Contain spills immediately with inert materials (e.g., sand, earth).

Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

Contaminated monomer may be unstable. Add inhibitor to prevent polymerization.

Absorbent can act as a contaminant (removes inhibitor) in liquid monomer. Avoid freestanding monomer with absorbent or add inhibitor to stabilize. Dispose of promptly.

6.4 Reference to Other Sections

No information available.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

This material is corrosive. This material is a potential sensitizer. For personal protection see section 8. Ground all metal containers during storage and handling. Product freezes at 13C/55F.

Improper thawing can result in violent polymerization. Thaw frozen drums by placing them in a heated room up to 25C/77F for 48 hours. DO NOT remove any material if stock is frozen or partially frozen. Mix during and after thawing to properly distribute inhibitor.

NEVER use steam or electric heating bands.

Contact a manufacturer of AA before attempting to thaw a bulk container of frozen AA.

7.2 Conditions for Safe Storage, Including Any Incompatibilities Storage Conditions:

Minor deviations (7C/13F) above the recommended temperature (see below) are acceptable for short periods of time (one week) for material in transit.

An automated tempered water system with high and low temperature alarms is recommended for controlling bulk storage temperature.

Trace equipment with self-limiting electrical tracing to prevent local freezing during cold weather.

NEVER use steam. Store in cool place.

Keep away from direct sunlight. Material can burn; limit indoor storage to approved areas equipped with automatic sprinklers. Ground all metal containers during storage and handling. Total absence of oxygen will inactivate the inhibitor. Do not store under oxygen-free environment. This product contains inhibitor to stabilize it during shipment and storage. The effectiveness of the inhibitor is dependent on the presence of dissolved oxygen. In order to maintain sufficient dissolved oxygen in the liquid to avoid polymerization, the monomer must always be stored with a vapor space oxygen concentration of 5% to 21%(air).

Use monomer within 1 year to avoid loss of stability or risk of polymerization. Keep container tightly closed.

Store material in containers made of the following: Stainless steel glass Aluminum polyethylene.

Note: The maximum recommended storage temperature reduces the rate of dimerization. In applications where

dimer is not important, this product may be stored at 35C/95F.

Storage temperature: ≤ 25 °C

Storage temperature: ≥ 15 °C

7.3 Specific End Uses

No information available.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Components with Workplace Exposure Control Parameters

Component	Regulations	Type of Listing	Control Limits
Glacial Acrylic Acid	ACGIH ACGHI	SKIN_DES TWA	5.9 mg/m ³ 2 ppm
Methoxyphenol	ACGHI	TWA	5 mg/m ³

8.2 Exposure Controls

- Engineering Measures** : Use only in area provided with appropriate exhaust ventilation.
- Protective Measures** : Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower
- Individual Protection Measures**
- Eye / Face Protection** : Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed
- Skin Protection** : Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): butyl-rubber Rinse and remove gloves immediately after use. Wash hands with soap and water. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.
- : NOTE: Material is a possible skin sensitizer. Reference: Basic Acrylic Monomer Manufacturers, Inc., "Chemical-Protective Gloves for Acrylic Acid and Acrylate Esters", September 1999
- Other Protection** : Wear as appropriate: Chemical resistant apron Boots Complete suit protecting against chemicals.
- Respiratory Protection** : Use certified respiratory protection equipment meeting EU requirements (89/656/EEC, 89/686/EEC), or equivalent, when respiratory risks cannot be avoided or sufficiently limited by technical means of collective protection or by measures, methods or procedures of work organization. None required if airborne concentrations are maintained below the exposure limit listed in Exposure Limit Information.

NOTE: Contact TASNEE for air monitoring method.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties :

Appearance	: liquid
Color	: colorless clear.
Odor	: pungent, Sweet Odor
Odor Threshold	: no data available
PH	: no data available
Boiling point/range	: 141 °C
Melting point/range	: 13 °C
Flash point	: 50 °C Tag closed cup
Flammability (Solid, Gas)	: No Data Available
Ignition temperature	: 412 °C (773.60 °F)
Lower explosion limit	: 2.00 %(V)
Upper explosion limit	: 8.00 %(V)
Vapour pressure	: 4.3 mmHg at 25 °C (77 °F)
Relative vapour density	: >1.0
Water solubility	: completely soluble
Relative density	: 1.05 at 25 °C (77 °F)
Viscosity, dynamic	: 1.250 mPa.s
Evaporation rate	: > 1.00
Percent volatility	: 100 %

9.2 Other information

Solubility in other solvents : No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

10.1 Reactivity	: No Data Available
10.2 Chemical Stability	: No Data Available
10.3 Possibility of Hazardous Reactions	: Stable under recommended storage conditions. Inhibitor is added to this product to prevent polymerization. However, this material can undergo hazardous polymerization. See Hazardous Polymerization for conditions to avoid.
10.4 Polymerization	: Excessive aging, heat, contamination with polymerization catalysts, oxygen-free atmosphere, inhibitor depletion or ultraviolet light (sunlight) may cause polymerization. Freezing followed by improper thawing and inhibitor redistribution may cause hazardous polymerization. An uncontrolled polymerization may produce a rapid release of energy with the potential for an explosion of unvented closed containers.
10.5 Conditions to Avoid	: No Data Available

10.6 Incompatible Materials : Avoid contact with Acids, Bases, Oxidizing Agents, Reducing Agents, UV Light, Free Radical Initiators, Organic Peroxides, Mild Steel

10.7 Hazardous Decomposition Products : There are no known hazardous decomposition products for this material.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute oral toxicity : LD50 rat 1,300 mg/kg

Acute inhalation toxicity : LC50 rat 4 h3600 mg/m3

Acute dermal toxicity : LD50 rabbit >3,000 mg/kg
: LD50 rat 951 mg/kg(occluded)

Skin Corrosion / Irritation : rabbit Corrosive

Serious Eye Damage / Eye Irritation : rabbit Corrosive

Sensitization : Does not cause skin sensitization

Carcinogenicity : In a lifetime skin painting study 2 of 30 mice exposed to 100ul 4% acrylic acid solution 3 times/week for 1.5 years developed malignant skin tumors; no skin tumors were seen in

controls. In a previous study, mice exposed to 25ul 1% acrylic acid solution 3 times/week for 1.5 years did not develop skin tumors. In a more recent chronic skin painting study, 2 strains (ICR,C3H) of mice were exposed to 25 or 100ul 1% acrylic acid solution 3 times/week for either 6 weeks or 25 months. An increased frequency of lymphosarcomas was observed in the highest dose group for only the females of the C3H strain of mice. There was no evidence that acrylic acid causes a carcinogenic effect on any organ system, including the skin-treated area, in both the male and female of the ICR strain of mice nor in the male of the C3H strain of mice.

Animal testing did not show any carcinogenic effects.

Mutagenicity : Tested in a battery of predictive assays for genotoxicity, in all cases except for the mouse Lymphoma and the in vitro cytogenetics assay acrylic acid was negative for genotoxic effects.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability : 81 % Stable to hydrolysis at pH 3, 7, 11.

Ecotoxicity effects

Toxicity to fish : static test LC50 Rainbow trout 96 h 27 mg/l

Toxicity to algae : EC50Algae 0.17 mg/l

Toxicity to aquatic invertebrates : EC50 Daphnia magna 95 mg/l
Proper

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

European Waste Catalogue (2000/532/EC) : The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact waste disposal services.

Environmental Precautions : CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Do not allow material to contaminate ground water system.

Disposal : After the addition of excess inhibitor, incinerate liquid and contaminated diking material in accordance with local, state, and federal regulations.

Additional Information

Contaminated Packaging : Dispose of as unused product. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all SDS and label warnings even after container is emptied. Do not burn, or use a cutting torch on, the empty drum. Pursue safe, legal methods for recycle of empty containers. Improper disposal or re-use of this container may be dangerous and illegal. Refer to applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

14.1 Classification for ROAD and Rail Transport (ADR/RID)

Proper Shipping Name : ACRYLIC ACID, STABILIZED

UN Number : UN 2218

Class : 8 (3)

Packing Group : II

Hazard Identification Number : 839

14.2 Classification for SEA Transport (IMO-IMDG)

Proper Shipping Name : ACRYLIC ACID, STABILIZED

UN Number : UN 2218

Class : 8 (3)

Packing Group : II

EmS : F-E
S-C

Marine Pollutant : Acrylic Acid

14.3 Classification for AIR Transport (IATA/ICAO)

Proper Shipping Name : ACRYLIC ACID, STABILIZED

UN Number : UN 2218

Class : 8 (3)

Packing Group : II

Note: Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Consult Current IATA Regulations Prior to Shipping by Air.

15. REGULATORY INFORMATION

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

- Workplace Classification** : This product satisfies all the requirements of the European Inventory of Existing Chemical Substances (EINECS).
- US Toxic Substances Control Act (TSCA)** : All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.
- Chemical Safety Assessment** : A Chemical Safety Assessment has been carried out for this substance.

16. OTHER INFORMATION

16.1 Further Information monomer end uses

- : Acrylic monomers are industrial chemicals and intended for industrial use only. They are not intended for direct consumer, medical, cosmetic, or personal uses. Exposure to high levels of acrylic monomer vapors may cause respiratory tract irritation, skin sensitization, or other effects.
- : Do not use in applications involving implantation in the human body or prolonged contact with internal body fluids or tissues. do not use for in-situ polymerizations on, or adhesion to, any human body part. TASNEE acrylic monomers are not designed or manufactured for these uses.
- : TASNEE does not recommend the use of acrylic monomers in medical applications or artificial fingernail extension or replacement applications.
- : TASNEE has neither sought, nor received, approval from the FDA or any other agency for these applications.
- : TASNEE has not performed technical or clinical testing on the suitability of acrylic monomers in uses involving prolonged contact with human tissues or in artificial fingernail extension or replacement applications. Use of unpolymerized, liquid acrylic and methacrylic monomers in artificial fingernail extension or replacement applications may result in loosening, shedding, fungal infection of nails.
- : Acrylic polymers are used safely in a wide variety of applications, including personal care and hygiene products
- : If you have any questions concerning the safe use of acrylic and methacrylic monomers, please call the manufacturer.

16.2 Legend

- ACGIH** : American Conference of Governmental Industrial Hygienists
- OSHA** : Occupational Safety and Health Administration
- PEL** : Permissible Exposure Limit
- STEL** : Short Term Exposure Limit (STEL)
- TLV** : Threshold Limit Value
- TWA** : Time Weighted Average (TWA)

NOTE:

The information contained in this SDS is to the best of TASNEE knowledge and believed accurate and reliable as of the date indicated, however, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own use.