

Revision: 1.0

Revision date:

04 March 2013

Date printed:

08 August 2019

Section 1. Identification

1.1 Product Identifier 0022

Product Name ACRYLIC ACID pure

CAS Number 79-10-7

REACH Registration No Not applicable

Molecular Formula $\text{CH}_2=\text{CHCOOH}$ =72.06

1.2 Relevant identified uses of the substance or mixture & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd



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Phone +44(0)113 2362811
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1.4 Emergency Telephone (08:00-16:30) 0113 2362811 (24hr) 112 (Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Flammable liquid, category 3 (Flam. Liq. 3). Skin corrosion/irritation, category 1A (Skin Corr. 1A). Acute toxicity, category 4 (oral) (Acute Tox. 4 (O)). Acute toxicity, category 4 (dermal) (Acute Tox. 4 (D)). Acute toxicity, category 4 (inhalation) (Acute Tox. 4 (I)). Hazard to aquatic environment, category 1 (Aquatic Acute 1).

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements Flammable liquid and vapour. Harmful if swallowed, inhaled and in contact with skin. Causes severe skin burns and eye damage. Very toxic to aquatic life.

Precautionary Statements Keep container tightly closed. Wear protective gloves / protective clothing / eye protection / face protection. Avoid breathing dust / fume / gas / mist / vapours / spray. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Acrylic acid	79-10-7	201-177-9		>99%	Flam. Liq. 3, Skin Corr. 1A, Acute Tox. 4 (O), Acute Tox. 4 (D), Acute Tox. 4 (I), Aquatic Acute 1

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. OBTAIN MEDICAL ATTENTION URGENTLY.
Inhalation	Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Ingestion	If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

4.2 Most important symptoms and effects, both acute & delayed.

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Water spray, alcohol resistant foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool.
Unsuitable Media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards	Vapour-air mixtures are explosive.
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5.3 Advice for firefighters

Advice for firefighters	Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.
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Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.
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6.2 Environmental precautions

Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
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6.3 Methods and material for containment and cleaning up

Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Ensure temperature does not reach more than 25 C Keep well separated from oxidising agents and peroxides.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits		
			Long Term (8hr TWA)	Short Term 15min period	
Acrylic acid	79-10-7	>99%	10.0 ppm	20.0 mg/m-3	30.0 ppm 60.0 mg/m-3

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hand Protection	Use solvent resistant gloves.
Eye Protection	Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards	No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Clear colourless liquid.
Odour	Characteristic acrylic odour.
pH	
Boiling Point	
Melting Point	
Flash Point	
Upper Flammable Limit	15.9%
Lower Flammable Limit	2.4%
Auto Ignition	
Explosive Properties	Has a tendency to polymerise and this may become explosive.
Oxidising Properties	No.
Vapour Pressure	
Relative Density	1.0460
Water Solubility	Completely soluble in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

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|------|------------------------------------|--|
| 10.1 | Reactivity | No data available. |
| 10.2 | Chemical Stability | Stable under normal conditions but can polymerise if the storage time and temperature is exceeded. |
| 10.3 | Possibility of hazardous reactions | No data available. |
| 10.4 | Conditions to Avoid | Temperatures above 25C. |
| 10.5 | Incompatible Materials | Polymerised by oxygen and peroxides, this polymerisation can become violently exothermic. |
| 10.6 | Hazardous Decomposition Products | None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide. |

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	The vapour is irritating to the eyes. The liquid and solutions will cause burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin	The liquid and solutions are strong skin irritants and can cause moderate to severe burns.
LD50 Skin	0.95mg/kg Rabbit
Ingestion	Causes severe corrosion of the mouth, throat and gastro-intestinal tract.
LD50 Oral	350mg/kg Rat
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour may cause strong irritation resulting in changes to skin and eyes, weight loss and inflammation of
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Induces gross chromosome aberrations and concentration dependent increases in mutant frequency.
Reproductive Effects	Administration of acrylic acid to pregnant rats on days 5, 10 and 15 of gestation produced a dose related increases in resorptions, gross and skeletal abnormalities and a reduction in birth weight.

Section 12. Ecological

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| 12.1 | Toxicity | Readily bio-degraded in the environment. Moderately toxic to mammals, fish and bacteria. |
| | LC50 Algal | Not available |
| | LC50 Crustacea | Not available |
| | LC50 Fish | Not available |
| 12.2 | Persistence and degradability | No data available. |
| 12.3 | Bioaccumulative potential | No data available. |
| 12.4 | Mobility in soil | No data available. |
| 12.5 | Results of PBT & vPvB assessment | Assessment not required. |
| 12.6 | Other adverse effects | None known at present. |

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion.
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Section 14. Transport Information

14.1 UN Number	2218
14.2 Proper Shipping Name	Acrylic acid, stabilised.
14.3 Transport classes	
UN classification	8
Subsidiary hazard(s)	3
Transport category	2
ADR Hazard ID	839
Tunnel Restriction Code	D/E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Flammable liquid, category 3; Skin corrosion/irritation, category 1A; Acute toxicity, category 4 (oral); Acute toxicity, category 4 (dermal); Acute toxicity, category 4 (inhalation); Hazard to aquatic environment, category 1

Signal word Danger

Hazard Pictograms



Hazard Statements H226, H302+H312+H332, H314, H400
 Flammable liquid and vapour. Harmful if swallowed, inhaled and in contact with skin. Causes severe skin burns and eye damage. Very toxic to aquatic life.

Precautionary Statements P233, P280, P261, P301+P310, P331
 Keep container tightly closed. Wear protective gloves / protective clothing / eye protection / face protection. Avoid breathing dust / fume / gas / mist / vapours / spray. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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Reviewed by chemist: 04 March 2013

Printed date: 08 August 2019

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