

Propionic Acid

SECTION 1. IDENTIFICATION

Product Identifier	Propionic Acid
Other Means of Identification	Carboxyethane, Methylacetic acid, Propanoic acid
Product Code(s)	PR1110, PR1111, PR1112
Product Family	Organic solution
Recommended Use	Industrial. Food additive.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	1538

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 3; Skin corrosion - Category 1B; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Flammable liquid and vapour.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapours/spray.

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Wash hands and skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

Continue rinsing.

Immediately call a POISON CENTRE or doctor.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Propionic acid	79-09-4	> 99	Carboxyethane, Methylacetic acid, Propanoic acid	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Immediately call a Poison Centre or doctor.

Skin Contact

Immediately rinse skin with lukewarm, gently flowing water for at least 30 minutes. Immediately call a Poison Centre or doctor.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes, while holding the eyelid(s) open. Contact physician immediately.

Ingestion

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

Provide general supportive measures (comfort, warmth, rest). All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace.

Most Important Symptoms and Effects, Acute and Delayed

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Identification) and Section 11 (Toxicological Information) of this SDS.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

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Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Special "alcohol resistant fire-fighting foams".

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Combustible liquid. Can ignite if heated. Releases vapour that can form explosive mixture with air at or above the flash point. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases. Use water spray to dilute spills to non-flammable mixtures. Use water spray to flush spills away from ignition sources. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials. Notify government occupational health and safety and environmental authorities.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Contain spill with earth, sand, or absorbent material which does not react with spilled material.

Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area.

Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating vapours or mists. Only use where there is adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Never add water to a corrosive. Always add corrosives slowly to COLD water. Electrically bond and ground equipment. Ground clips must contact bare metal. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Clear of combustible and flammable materials (e.g. old rags, cardboard). Store in the original, labelled, shipping container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Propionic acid	10 ppm		Not established			

TLV Basis - Critical Effect(s): Eye irritation
Skin irritation
Upper respiratory tract irritation

TLV Comments:

NOTE: In many jurisdictions, exposure limits are similar to the ACGIH TLVs. Since the manner in which exposure limits are established, interpreted, implemented can vary, obtain detailed information from the appropriate government agency in each jurisdiction.

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Viton®, Viton®/butyl rubber, Interceptor®, Microchem® 4000.

The following materials should NOT be used: natural rubber, nitrile rubber, polyvinyl chloride.

Respiratory Protection

For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge, or, wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear colourless oily liquid.
Odour	Pungent
Odour Threshold	0.033 ppm (recognition)
pH	2.9 (0.1 M solution)
Melting Point/Freezing Point	-20.8 - -22.0 °C (-5.4 - -7.6 °F) (melting); -20.8 - -22.0 °C (-5.4 - -7.6 °F) (freezing)
Initial Boiling Point/Range	141.1 °C (286.0 °F)
Flash Point	52.2 - 54.4 °C (126.0 - 129.9 °F)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	12.1% (upper); 2.9% (lower)
Vapour Pressure	0.32 - 0.40 kPa (2.40 - 3.00 mm Hg)
Vapour Density (air = 1)	2.55
Relative Density (water = 1)	0.992 - 0.994
Solubility	Soluble in all proportions in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	0.25 - 0.33

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Auto-ignition Temperature	466 °C (871 °F)
Decomposition Temperature	Not available
Viscosity	1.106 - 1.108 mm ² /s at 20 °C (calculated) (kinematic); 1.099 centipoises at 20 °C (dynamic)
Other Information	
Physical State	Liquid
Molecular Weight	74.08

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No reactivity test data was located.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

High temperatures. Temperatures above 52.0 °C (125.6 °F)

Incompatible Materials

Oxidizing agents (e.g. peroxides), metals (e.g. aluminum), reducing agents (e.g. hydroquinone), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

None reported.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Propionic acid	> 4900 mg/m ³ (rat) (4-hour exposure)	4270 mg/kg (rat)	500 mg/kg (rabbit)

Skin Corrosion/Irritation

Animal tests show moderate or severe irritation.

Serious Eye Damage/Irritation

Animal tests show serious eye damage.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause severe nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Ingestion

Toxic, can cause death Causes severe irritation or burns to the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

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Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Propionic acid	Not Listed	Not designated	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Bury in a licensed landfill or burn in an approved incinerator according to federal, provincial/state, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN1848	PROPIONIC ACID with not less than 10 percent and less than 90 percent acid by mass	8 Corrosives	III
Canadian TDG	UN1848	PROPIONIC ACID with not less than 10 percent and less than 90 percent acid by mass	8 Corrosives	III

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

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SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 3** **Flammability - 2** **Instability - 0**

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

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References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault
Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and
Safety (CCOHS).

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