

Acetic Acid, Glacial**SECTION 1. IDENTIFICATION**

Product Identifier	Acetic Acid, Glacial
Other Means of Identification	Ethanoic acid, Methanecarboxylic acid
Product Code(s)	AC2610, AC2620
Product Family	Organic
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	Infotrac, 1-800-535-5053, 24 Hours
SDS No.	0082

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 1A; Serious eye damage - Category 1

Label Elements

Signal Word:
Danger

Hazard Statement(s):

Flammable liquid and vapour.
Causes severe skin burns and eye damage.

Precautionary Statement(s):

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use non-sparking tools.
Use explosion-proof electrical, ventilating, and lighting equipment.
Take action to prevent static discharges.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

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Use only outdoors or in a well-ventilated area.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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.

IF ON SKIN: Wash with plenty of water.

Immediately call a POISON CENTRE or doctor.

Other Hazards

May be a health and fire hazard in a confined space.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Acetic acid (solutions greater than 10%)	64-19-7	99	Ethanoic acid, Methanecarboxylic acid

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation or a rash occurs, get medical advice or attention.

Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

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

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can cause severe irritation of the nose and throat. Can cause severe lung injury. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. If on skin: may burn the skin. Permanent scarring may result. Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result. If swallowed: blood function tests may show abnormal results. Can harm the blood (decreased ability to carry oxygen). Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

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

Extinguishing Media

Suitable Extinguishing Media

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

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foams".

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Reactive flammable. Can be ignited by static discharge. May travel a considerable distance to a source of ignition and flash back to a leak or open container. 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. Fight fire from a safe distance or a protected location. 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

Emergency responders: use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container 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

Wear personal protective equipment to avoid direct contact with this chemical. Do not get in eyes, on skin or on clothing. Prevent accidental contact with incompatible chemicals. Electrically bond and ground equipment. Ground clips must contact bare metal. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. For large-scale use: use in temperature-controlled area. See advice on temperature in Conditions to Avoid (Section 10 Stability and Reactivity).

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity), an approved, fire-resistant area, secure and separate from work areas, clear of combustible and flammable materials (e.g. old rags, cardboard). Store in the original, labelled, shipping container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Acetic acid (solutions greater than 10%)	10 ppm	15 ppm	10 ppm			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant

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exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection. Provide eyewash and safety shower if contact or splash hazard exists.

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: butyl rubber, Silver Shield/4H® (PE/EVAL/PE), Trelchem® HPS, Trelchem® VPS, Tychem® Responder, Tychem® TK.

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

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge, wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear liquid. Absorbs moisture from the air.
Odour	Pungent
Odour Threshold	0.037 - 0.15 ppm (detection)
pH	2.4 (6% solution)
Melting Point/Freezing Point	16.6 °C (melting); 16.6 °C (freezing)
Initial Boiling Point/Range	118 °C (244 °F)
Flash Point	40 °C (104 °F) (closed cup)
Evaporation Rate	0.97 (n-butyl acetate = 1)
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	16% (upper); 4% (lower)
Vapour Pressure	1.52 kPa (11.40 mm Hg) at 20 °C
Vapour Density (air = 1)	2.07
Relative Density (water = 1)	1.05 at 20 °C
Solubility	Soluble in water; Soluble in all proportions in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	-0.17
Auto-ignition Temperature	464 °C (867 °F)
Decomposition Temperature	Not available
Viscosity	1.16 centistokes at 20 °C (kinematic); 1.22 centipoises at 20 °C (dynamic)
Other Information	
Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

High temperatures. Open flames, sparks, static discharge, heat and other ignition sources. Temperatures above 39 °C

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Incompatible Materials

Reacts violently with: metals (e.g. aluminum), strong bases (e.g. sodium hydroxide), strong oxidizing agents (e.g. perchloric acid), aldehydes (e.g. acetaldehyde).

Hazardous Decomposition Products

Irritating chemicals; very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Acetic acid (solutions greater than 10%)	4653 ppm (rat) (4-hour exposure)	3530 mg/kg (rat)	1060 mg/kg (rabbit)

Skin Corrosion/Irritation

Animal tests show skin corrosion.

Serious Eye Damage/Irritation

Causes serious eye damage based on skin corrosion information.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Ingestion

Causes severe irritation or burns to the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

If inhaled: may cause irritation of the respiratory system. May cause respiratory tract injury. Following skin contact: may cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Acetic acid (solutions greater than 10%)	Not evaluated	Not designated	Not Listed	

IARC: Group 3 – Not classifiable as to its carcinogenicity to humans. ACGIH®: A4 – Not classifiable as a human carcinogen.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not known to be a mutagen.

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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

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Treat waste in an approved waste disposal facility.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	2789	Acetic Acid, Glacial Solution	8	II

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.

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). Eastman Chemical Company database.

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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