

SAFETY DATA SHEET

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

1.1 Product identifiers

Product name:	Acetic Acid, Glacial
CAS number:	64-19-7
Synonyms:	Acetic Acid; Ethanoic acid; Methane Carboxylic Acid.

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
 - Identified Uses : General Purpose Solvent

1.3 Details of the supplier of the safety data sheet

Company	: Lab Alley, LLC 22111 Highway 71 West, Suite 601 Spicewood, Texas 78669 U.S.A.
Telephone	: 512-668-9918
Fax	: 512-886-4008

1.4 Emergency telephone

Emergency Phone #	: US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids (Category 3) Skin corrosion (Category 1A) Serious eye damage (Category 1) Acute toxicity (inhalation:vapor) Category 4 Hazardous to the aquatic environment - Acute Hazard Category 3

2.2 GHS Label elements, including precautionary statements



Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

3.1 Components

Ingredient	CAS Number	Percent	Hazardous
			Chemical
Acetic acid	64-19-7	100	Yes

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice:	Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
In case of inhalation:	Remove the victim into fresh air. Immediately consult a doctor/medical service. Doctor: administration of corticoid spray.

In case of eye contact:	Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist.
In case of skin contact:	Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents without medical advice. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.
In case of ingestion:	Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Do not apply (chemical) neutralizing agents without medical advice. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.htm). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital.

4.2 Most important symptoms and effects, both acute and delayed

Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Causes severe skin burns. Causes serious eye damage. Coughing. Dry/sore throat. Respiratory difficulties. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung edema. Caustic burns/corrosion of the skin. Corrosion of the eye tissue. Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Blood in vomit. Diarrhea. Shock. Low arterial pressure. Enlargement/disease of the liver. Decreased renal function. Affection/discoloration of the teeth.

4.3 Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable (and unsuitable) extinguishing media

Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quickacting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcoholresistant). Water spray if puddle cannot expand. DO NOT USE: Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.2 Specific hazards arising from the substance or mixture

DIRECT FIRE HAZARD. Flammable liquid and vapour. Gas/vapor flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Reactions involving a fire hazard: see "Reactivity Hazard". DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard". Upon combustion: CO and CO2 are formed.

5.3 Special protective equipment and precautions for firefighters

Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. Do not enter fire area without proper protective equipment, including respiratory protection.

5.4 Further information

None.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute combustible/toxic gases/ vapours with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills. Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite or kieselguhr, powdered limestone. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4 Reference to other sections

No additional information available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Flammable vapors may accumulate in the container. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Exhaust gas must be neutralised. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosionproof equipment. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed.

Hygiene measures

Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources. KEEP SUBSTANCE AWAY FROM: combustible materials, oxidizing agents, (strong) bases, metals, alcohols, amines, water/moisture. Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Fireproof storeroom. Keep locked up. Provide for a tub to collect spills. Provide the tank with earthing. Detached building. Store only in a limited quantity. Meet the legal requirements.

SECTION 8. Exposure controls/personal protection

8.1 Occupational exposure limits

Acetic Acid (64-19-7)		
USA - ACGIH - Occupational Exposure Limits		
Local name	Acetic acid	
ACGIH TWA (mg/m ³)	25 mg/m³	
ACGIH TWA (ppm)	10 ppm	
ACGIH STEL (mg/m ³)	37 mg/m³	
ACGIH STEL (ppm)	15 ppm	
Remark (ACGIH)	TLV® Basis: URT & eye irr; pulm func	
Regulatory reference	ACGIH 2020	
USA - OSHA - Occupational Exposure Limits		
Local name	Acetic acid	
OSHA PEL (TWA) (mg/m ³)	25 mg/m ³	
OSHA PEL (TWA) (ppm)	10 ppm	
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1	
USA - IDLH - Occupational Exposure Limits		
US IDLH (ppm)	50 ppm	
USA - NIOSH - Occupational Exposure Limits		
NIOSH REL (TWA) (mg/m ³)	25 mg/m³	
NIOSH REL (TWA) [ppm]	10 ppm	
NIOSH REL (STEL) (mg/m ³)	37 mg/m³	
NIOSH REL (STEL) [ppm]	15 ppm	

8.2 Exposure controls

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Material should be handled in a laboratory hood whenever possible.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.

Skin and body protection

Protective gloves against chemicals. Head/neck protection. Corrosion-proof clothing. Flame retardant antistatic protective clothing.

Respiratory protection

Required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Prevent soil and water pollution. Prevent spreading in sewers. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid.	
Appearance	Colorless.	
Odor	Irritating/pungent odor, Vinegar odor.	
Odor Thresh	No data available.	
рН	2.4 (0.1 mol/l)	
Melting Point/Range	Melting point: 16.64 °C (61.95 °F)	
Boiling Point/Range	117.9 °C 244.2 °F at 1,013.25 hPa	
Flash Point	39 °C (102 °F) - closed cup	
Evaporation Rate	No data available.	
Flammability (solid, gas)	Not applicable.	
Flammability or explosive limit		
Upper : 19.9 v/v		
Lower : 4% v/v		
Vapor Pressure	20.79 hPa at 25 °C (77 °F)	
Vapor Density	2.07	
Density	1.04 g/cm3 at 25 °C (77 °F)	
Solubility	602.9 g/l at 25 °C (77 °F) at 1,013 hPa - completely soluble	
Partition coefficient; n-octanol/water	log Pow: -0.17 at 25 °C (77 °F) - Bioaccumulation is not expected., (ECHA)	
Autoignition Temp	463 °C (865 °F)	
Decomposition Temp	Distillable in an undecomposed state at normal pressure.	
Viscosity	1.17 mm2/s at 20 °C (68 °F)	
Molecular Formula	C2H4O2	
Molecular Weight	60.052	
VOC Content(%)	No data available.	
Oxidizing properties	None.	

9.2 Other safety information

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

Violent to explosive reaction with many compounds e.g.: with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases.

10.2 Chemical stability

Hygroscopic.

10.3 Possibility of hazardous reactions

Reacts violently with (some) bases: release of heat.

10.4 Conditions to avoid

Extremely high or low temperatures. Incompatible materials.

10.5 Incompatible materials

May react violently with alkalis. May react with bases, copper, silver, mercury, magnesium, zinc and their alloys.

10.6 Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acetic Acid (64-19-7)	
LD50 oral rat	3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))
LC50 Inhalation - Rat	11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))
ATE US (oral)	3310 mg/kg body weight
ATE US (vapors)	11.4 mg/l/4h
ATE US (dust, mist)	11.4 mg/l/4h

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Not classified.

Germ cell mutagenicity

Not classified.

Carcinogenicity

Not classified.

Reproductive toxicity

Not classified.

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Not classified.

Aspiration hazard

Not classified.

Chronic effects

Affection/discoloration of the teeth.

11.2 Additional information

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Ingestion or inhalation of concentrated acetic acid causes damage to tissues of the respiratory and digestive tracts. Symptoms include: hematemesis, bloody diarrhea, edema and/or perforation of the esophagus and pylorus, pancreatitis, hematuria, anuria, uremia, albuminuria, hemolysis, convulsions, bronchitis, pulmonary edema, pneumonia, cardiovascular collapse, shock, and death. Direct contact or exposure to high concentrations of vapor with skin or eyes can cause: erythema, blisters, tissue destruction with slow healing, skin blackening, hyperkeratosis, fissures, corneal erosion, opacification, iritis, conjunctivitis, and possible blindness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. Ecological information

12.1 Toxicity

Ecotoxicity:	
Toxicity to fish	semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test EC50 - Skeletonema costatum - > 1,000 mg/l - 72 h (ISO 10253)
Toxicity to bacteria	EC5 - Pseudomonas putida - 2,850 mg/l - 16 h Remarks: neutral (maximum permissible toxic concentration) (Lit.) microtox test EC50 - Photobacterium phosphoreum - 11 mg/l - 15 min Remarks: (IUCLID)

12.2 Persistence and Degradability

Readily biodegradable in soil and in water.

12.3 Bioaccumulative Potential

No data available.

12.4 Mobility in Soil

Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No additional information available.

SECTION 13. Disposal considerations

13.1 Waste Disposal Methods

o not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

SECTION 14: Transport information

UN 2789
Acetic acid, glacial
8 (3)
II
UN 2789
Acetic acid, glacial
8 (3)
11
UN 2789
Acetic acid, glacial
8 (3)
II

SECTION 15: Regulatory information

U.S. Federal Regulations

Acetic Acid (64-19-7)		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		
Not subject to reporting requirements of the United States SARA Section 313		
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids)	
	Health hazard - Skin corrosion or Irritation	
	Health hazard - Serious eye damage or eye irritation	
	Health hazard - Acute toxicity (any route of exposure).	
All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory		

International Regulations

CANADA

Acetic Acid (64-19-7)
Listed on the Canadian DSL (Domestic Substances List)
EU-Regulations
No additional information available
National regulations
No additional information available

U.S. State Regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm .

SECTION 16: Other information

Issue Date	09/28/2020
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Disclaimer:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.