SAFETY DATA SHEET

ACETIC ACID (GLACIAL)

CAS No.: 64-19-7

This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

GHS Product identifier

ACETIC ACID (GLACIAL)
Ethanoic Acid; Methanecarboxylic Acid
CAS: 64-19-7

Other means of identification

Formula: $C_2H_4O_2$ | Chemical classification: Carboxylic acid

Recommended use of the chemical and restrictions on use

Relevant uses: Chemical intermediate/raw material, descaling & pH-adjustment applications, laboratory and industrial reagent, textile and dyeing auxiliary. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3.

Supplier's details

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), consistent with the source manufacturer's data (Flash point 39°C, corrosive to skin/eyes) and well-established public GHS classification for this CAS number:

Flam. Liq. 3	Flammable liquid, Category 3, H226
Skin Corr. 1A	Skin corrosion, Category 1A, H314 (includes serious eye damage)

GHS label elements, including precautionary statements

GHS: Danger

Hazard statements

Flam. Liq. 3: H226 – Flammable liquid and vapour.
Skin Corr. 1A: H314 – Causes severe skin burns and eye damage.

Precautionary statements

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting equipment.
P260: Do not breathe mist/vapours/spray.
P264: Wash skin thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P321: Specific treatment (see first aid measures on this SDS).
P363: Wash contaminated clothing before reuse.
P370+P378: In case of fire: Use dry powder, foam, carbon dioxide or water spray to extinguish.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container in accordance with local regulations on hazardous waste.

Other hazards which do not result in classification

Vapour is heavier than air and may travel a considerable distance to a source of ignition and flash back. Sealed containers may explode when heated.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Acetic Acid, Glacial

In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 64-19-7	Acetic Acid — Flam. Liq. 3: H226; Skin Corr. 1A: H314 – Danger	> 99.7%

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

Mixtures

Non-applicable

4. FIRST AID MEASURES

Description of necessary first-aid measures

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this SDS to the doctor in attendance.

By inhalation

Remove to fresh air. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Get medical attention immediately.

By skin contact

Flush affected area with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes; wash clothing before reuse. Get medical attention immediately.

By eye contact

Check for and remove contact lenses. Immediately flush eyes with a gentle but large stream of water for at least 15 minutes, lifting the lower and upper eyelids occasionally. Get medical attention immediately.

By ingestion/aspiration

Do not induce vomiting. If vomiting occurs, keep the head low so vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Most important symptoms/effects, acute and delayed

Corrosive: may cause damage to mucous membranes of nose, throat, lungs and bronchial system on inhalation; burns to lips, oral cavity, upper airway, oesophagus and digestive tract on ingestion; severe burns on skin and eye contact, with possible impaired sight or blindness. Repeated or prolonged exposure can produce target organ damage (skin, lungs, respiratory system, eyes).

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically. Keep victim under observation.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Suitable: Water spray/fog, dry chemical powder, foam, carbon dioxide.
Unsuitable: Do not use a solid (straight) water stream, as it may scatter and spread the fire.

Specific hazards arising from the chemical

Highly flammable – vapours may cause a flash fire or ignite explosively and may travel a considerable distance to a source of ignition and flash back. Heat may cause sealed containers to explode. Above the flash point, vapour-air mixtures are explosive within the flammable limits (LEL 4% – UEL 19.9%). Material is sensitive to static discharge. Hazardous combustion products: carbon monoxide, carbon dioxide.

Special protective actions for fire-fighters

Wear MSHA/NIOSH-approved (or equivalent) self-contained positive-pressure or pressure-demand breathing apparatus and full protective gear.

Additional provisions

Use water spray to cool unopened containers. Withdraw immediately in case of rising sound from venting safety devices or discolouration of tanks due to fire. Move containers from the fire area if this can be done without risk. Do not breathe fumes in the event of fire/explosion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate the area of the leak/spill. Isolate the hazard area and keep unnecessary/unprotected personnel away. Keep upwind and out of low areas. Wear PPE per Section 8. Avoid contact with eyes, skin and clothing. Take precautionary measures against static discharge.

For emergency responders

Use spark-proof tools and explosion-proof equipment; ground all equipment used when handling the product. See Section 8.

Environmental precautions

Prevent further leakage/spillage if safe to do so. Do not contaminate water; avoid discharge into drains, water courses or onto the ground. Dike large spills if needed.

Methods and materials for containment and cleaning up

Remove all sources of ignition. Stop the flow of material if without risk. Prevent entry into waterways, sewers, basements or confined areas; dike the spilled material where possible. Absorb spill with an inert material (vermiculite, dry sand, earth, cloth, fleece) and place in a suitable non-combustible container for reclamation or disposal. Do not use combustible materials such as sawdust. Neutralize spill area and washings with soda ash or lime. Never return spills to original containers for reuse.

Reference to other sections

See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling

A. General precautions for safe use

Do not handle or open near flame, heat or ignition sources. Protect material from direct sunlight. Use only in well-ventilated areas with sufficient air exchange/exhaust. Avoid contact with skin, eyes and clothing; do not breathe vapours or spray mist. Take precautionary measures against static discharge.

B. Technical recommendations for the prevention of fires and explosions

Keep away from incompatible materials. Ground container and transfer equipment to eliminate static electric sparks. Use caution when combining with water – do NOT add water to acid; always add acid to water while stirring to prevent release of heat, steam and fumes.

C. Technical recommendations on general occupational hygiene

When using, do not eat, smoke or drink. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

D. Technical recommendations to prevent environmental risks

Comply with all national, state and local codes pertaining to the storage, handling, dispensing and disposal of flammable liquids. Provide tight electrical equipment protected against corrosion.

Conditions for safe storage, including any incompatibilities

A. Specific storage requirements

Flash Point	39°C (103°F), closed cup
Storage	Cool, dry, ventilated area, away from flame/ignition/heat
Container	Store in original container, tightly closed and upright

B. General conditions for storage

Store away from flame, sources of ignition, heat and incompatible materials. Keep away from food, drink and animal feedingstuffs. Keep out of reach of children. For additional information see subsection 10.5.

Specific end use(s)

Laboratory and/or industrial reagent. Except for the instructions already specified, no special recommendation regarding the uses of this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Identification	Occupational Exposure Limit Type	Value
Acetic Acid CAS: 64-19-7	ACGIH TWA	10 ppm
	ACGIH STEL	15 ppm
	OSHA PEL	10 ppm (25 mg/m³)

Appropriate engineering controls

Ensure adequate ventilation matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below the occupational exposure limits. Explosion-proof exhaust ventilation should be used.

B. Respiratory protection

If engineering controls do not maintain airborne concentrations below the recommended limits, an approved respirator must be worn – chemical respirator with acid-gas cartridge. Use a positive-pressure air-supplied respirator where there is potential for uncontrolled release.

C. Specific protection for the hands

Wear appropriate chemical-resistant gloves.

D. Eye and face protection

Wear safety glasses with side shields or goggles and a face shield.

E. Bodily protection

Wear appropriate chemical-resistant clothing with long sleeves.

F. Additional emergency measures

Provide eyewash station and safety shower in the work area.

Environmental exposure controls

Avoid environmental spillage of both the product and its container. See subsection 6.2.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state at 20°C	Liquid
Appearance	Transparent
Color	Colorless
Odor	Strong, vinegar-like
Odour threshold	0.48 ppm
Volatility	
Boiling point at atmospheric pressure	118.1°C (244.6°F)
Vapour pressure at 25°C	2.09 kPa
Evaporation rate (n-BuAc = 1)	0.97
Product Description	
Specific gravity	1.05
Percent volatile	100%
pH	2.4 (1.0 M solution)
Vapour density	2.1 (air = 1)
Partition coefficient n-octanol/water	–0.17
Solubility in water	Miscible
Melting point/freezing point	16.6°C (61.9°F)
Flammability	
Flash Point	39°C (103°F), closed cup
Flammability (liquid)	Flammable
Autoignition temperature	426°C (799°F)
Lower / Upper flammability limit (% v/v)	4% / 19.9%

Other information

Explosive properties	Not classified as explosive
Oxidising properties	Not oxidising
Molecular formula / weight	$C_2H_4O_2$ / 60.05 g/mol

10. STABILITY AND REACTIVITY

Reactivity

Can react vigorously, violently or explosively with incompatible materials (see 10.5).

Chemical stability

Stable under normal conditions. This substance is hygroscopic and will absorb moisture from the air.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to avoid

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Heat, flames, sparks, ignition sources	Protect from direct sunlight	Hygroscopic – avoid moisture

Incompatible materials

Oxidizing agents, peroxides, caustics, glycols, metals.

Hazardous decomposition products

Carbon dioxide and carbon monoxide may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

In case of exposure that is repetitive, prolonged, or at concentrations higher than the recommended occupational exposure limits, adverse health effects may result depending on the means of exposure:

A. Ingestion (acute effect)

Corrosive – may produce burns to the lips, oral cavity, upper airway, oesophagus and digestive tract. Oral Rat LD50: 3.31 g/kg.

B. Inhalation (acute effect)

Corrosive – may cause damage to mucous membranes of the nose, throat, lungs and bronchial system. Inhalation Rat LC50: 11.4 mg/L (4h).

C. Contact with skin and eyes (acute effect)

Corrosive – causes severe burns; may cause eye damage, impaired sight or blindness. Skin Rabbit LD50: 1060 mg/kg.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)

Not considered a carcinogen by IARC, ACGIH, NTP or OSHA. No data indicating mutagenic/genotoxic effects at > 0.1% concentration. Contains no ingredient listed as toxic to reproduction; no data indicating teratogenic effects.

E. Sensitizing effects

Not a skin sensitizer.

F. Specific target organ toxicity (STOT) – single exposure

Corrosive effects to skin, lungs, respiratory system and eyes.

G. Specific target organ toxicity (STOT) – repeated exposure

Repeated or prolonged exposure can produce target organ damage; persons with pre-existing skin disorders or eye problems may be more susceptible.

H. Aspiration hazard

No data available.

Product-specific toxicological information

Identification	Acute Toxicity	Genus
Acetic Acid CAS: 64-19-7	LD50 oral: 3.31 g/kg	Rat
	LD50 dermal: 1060 mg/kg	Rabbit
	LC50 inhalation: 11.4 mg/L (4h)	Rat

12. ECOLOGICAL INFORMATION

Harmful to aquatic life. May affect the acidity (pH) of water, leading to harmful effects on aquatic organisms.

Toxicity

Acute Toxicity	Species	Genus
EC50: 65 mg/L (48h)	Daphnia magna	Water flea/Crustacean
LC50: 75 mg/L (96h)	Lepomis macrochirus	Bluegill/Fish

Persistence and degradability	Expected to be readily biodegradable.
Bioaccumulative potential	Partition coefficient (n-octanol/water): –0.17 – low bioaccumulation potential.
Mobility in soil	Miscible with water; expected to be highly mobile in soil/water systems.
Results of PBT and vPvB assessment	Not expected to meet PBT/vPvB criteria (low bioaccumulation potential, readily biodegradable).
Other adverse effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Dispose of this material and its container at a hazardous or special waste collection point. Incinerate under controlled conditions in an approved incinerator. All wastes must be handled in accordance with local, state and central regulations. Since emptied containers retain product residue, follow label warnings even after the container is emptied; offer rinsed packaging to local recycling facilities where feasible.

Need a price or stock? Request a quote at www.surajchemicals.com/request-quote | WhatsApp +91 70927 22822

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023)

14.1 UN number	UN2789
14.2 UN proper shipping name	ACETIC ACID, GLACIAL (ACETIC ACID SOLUTION, > 80% acid)
14.3 Transport hazard class(es)	8 (Subsidiary risk: 3)
14.4 Packing group	II
14.5 Environmental hazard	No
14.6 Special precautions for user	ERG Number: 132. Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22)

14.1 UN number	UN2789
14.2 UN proper shipping name	ACETIC ACID, GLACIAL
14.3 Transport hazard class(es)	8 (Subsidiary risk: 3)
14.4 Packing group	II
14.5 Marine pollutant	No
14.6 Special precautions for user	EmS Codes: F-E, S-C
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024)

14.1 UN number	UN2789
14.2 UN proper shipping name	ACETIC ACID, GLACIAL
14.3 Transport hazard class(es)	8 (Subsidiary risk: 3)
14.4 Packing group	II
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

This product is considered a hazardous chemical under standard occupational hazard communication criteria (equivalent to OSHA HazCom, 29 CFR 1910.1200). Listed on international chemical inventories including TSCA (USA), DSL (Canada), EINECS (Europe), and the inventories of China, Japan, Korea, New Zealand, Australia and the Philippines.

Other legislation

Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
The Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996
Public Liability Insurance Act, 1991

16. OTHER INFORMATION

Legislation related to safety data sheets

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3

H226: Flammable liquid and vapour.
H314: Causes severe skin burns and eye damage.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources

Manufacturer's Material Safety Data Sheet; standard, publicly published GHS classification data for CAS 64-19-7 (Acetic Acid).

Abbreviations and acronyms

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | ERG: Emergency Response Guidebook | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | IARC: International Agency for Research on Cancer

Disclaimer: The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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