



MATERIAL SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Acetic Acid, Glacial, ACS Reagent
SYNONYMS: Ethanoic Acid
PRODUCT NUMBER: A256
CAS NO: 64-19-7
NIOSH/RTECS NO: AF1225000
COMPANY INFO: *PhytoTechnology Laboratories*®
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent	Hazardous
Acetic Acid, Glacial	64-19-7	100 %	OSHA PEL: 10 ppm; ACGIH TLV: 10 ppm

3. PHYSICAL & CHEMICAL PROPERTIES

Product Description: Acetic Acid, Glacial, ACS Reagent
Formula: $C_2H_4O_2$
Molecular Weight: 60.05 g/mol
Storage Temperature: Room Temperature
pH (Neat): ~1.0 – 3.0
Vapor Density: N/A
Melting Point: 16.7 °C (Contracts slightly on freezing)
Specific Gravity: ~1.05 g/cm³
Solubility: Miscible with Water
Appearance: Colorless to slight yellow tint, clear liquid
Odor: Strong pungent odor

4. HAZARDS IDENTIFICATION

Label Hazard Warnings: Flammable. Harmful by inhalation, in contact with skin, and if swallowed. Causes severe burns.
Label Precautionary Statements: Do not breathe fumes. In case of contact with eyes, rinse immediately and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.
Laboratory Protective Equipment: Safety glasses, protective gloves, lab coat, and appropriate respirator.

HMIS Rating:	Health	Flammability	Reactivity	Personal Protection Equipment
	3	2	0	J
NFPA Rating:	Health	Flammability	Reactivity	Special Hazards
	3	2	0	-

Storage and Handling Precautions: Store in a tightly sealed container in a cool, dry place. Do not breathe fumes. Wash thoroughly after handling.

5. POTENTIAL HEALTH HAZARDS/ TOXICOLOGICAL INFORMATION

Toxicity:	LD ₅₀ (Oral-Rat)(mg/Kg):	3310
	LD ₅₀ (Derm-Rabbit)(mg/Kg):	1060
	LD ₅₀ (IVN-Mouse)(mg/Kg):	525
Carcinogenicity:	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No
Effects of Overexposure:	Irritation, itching, gastrointestinal upset, corrosion of tissue and enamel, vomiting, hematemesis, circulatory problems, uremia, bronchitis, or death	
Target Organs:	Eyes, kidneys, lungs, skin, teeth	
Medical Conditions Aggravated By Exposure:	Pre-existing conditions	
Routes of Entry:	Ingestion, inhalation, skin and eye contact	

The toxicological properties of this product have not been thoroughly investigated

6. EMERGENCY AND FIRST AID

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Get medical attention.
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Get medical attention if irritation persists.

7. FIRE HAZARDS & FIRE FIGHTING MEASURES

Flash Point (Closed Cup):	39 C (103 F)	
Flammable Limits:	Upper – 19.9 %	Lower – 4.0 %
Fire Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.	
Special Fire-Fighting Procedures:	In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.	
Unusual Fire & Explosion Hazards:	May emit toxic fumes under fire conditions.	
Toxic Gases Produced:	Carbon monoxide, carbon dioxide	

8. REACTIVITY & CONDITIONS TO AVOID

Stability:	Stable under normal conditions of use. Acetic acid contracts slightly upon freezing which may cause the container to burst.
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Incompatibles, protect from freezing
Incompatibles:	Strong oxidizers, strong bases, carbonates, hydroxides, sodium peroxide, many oxides, phosphates, chromic acid, perchloric acid.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide

9. SPECIAL PRECAUTIONS/PROTECTIVE EQUIPMENT

Ventilation:	Ventilation hood recommended
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator is recommended where airborne concentrations are expected to exceed exposure limits. Protection provided by purifying respirators is limited.
Eye/Skin Protection:	Have eye-washing facilities readily available where eye contact can occur. Wear chemical safety goggles. Use appropriate chemical protective gloves when handling. Showering and changing into street clothes after work is recommended.

10. SPILLS & LEAKS

Spill or Discharge:	Wear suitable protective clothing and a self-contained breathing apparatus if available. Carefully sweep up and remove. Place material in a dry container and cover. Remove from the area. Flush spill area with water.
Disposal Procedure:	Dispose in accordance with all applicable federal, state, and local environmental regulations. Neutralize with 5% sodium hydroxide or sodium bicarbonate solutions.
EPA Hazardous Waste Number:	N/A

11. TRANSPORTATION DATA

Domestic (D.O.T.):	Proper Shipping Name:	ACETIC ACID, GLACIAL
	Hazard Class:	8 (3)
	UN/NA:	UN2789
	Labels:	CORROSIVE/ FLAMMABLE
International: IMDG:	Proper Shipping Name:	ACETIC ACID, GLACIAL
	Hazard Class:	8 (3)
	UN/NA:	UN2789
	Labels:	CORROSIVE/ FLAMMABLE
IATA:	Proper Shipping Name:	ACETIC ACID, GLACIAL
	Hazard Class:	8 (3)
	UN/NA:	UN2789
	Labels:	CORROSIVE/ FLAMMABLE

12. REGULATORY INFORMATION

U.S. Federal Regulatory Information

TSCA: Yes

SARA TITLE III:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: Yes

Section 304 (EHS/CERCLA) Ingredients: Yes

SARA TITLE III NOTIFICATION INFORMATION

Acute Health Hazard: Yes

Chronic Health Hazard: Yes

Fire Hazard: Yes

Sudden Release of Pressure Hazard: No

International Regulatory Information

Risk Phrases: 10 - Flammable
20/21/22 – Harmful by inhalation, in contact with skin, and if swallowed
35 – Causes severe burns

Safety Phrases: 23 – Do not breathe fumes
26 – In case of contact with eyes, rinse immediately and seek medical advice
36/37/39 – Wear suitable protective clothing, gloves, and eye/face protection

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