*Phyto*Technology Laboratories®

SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Acetic Acid, Glacial, ACS Reagent

PRODUCT NUMBER: A256

COMPANY INFO: *Phyto*Technology Laboratories®
PO Box 12205, Shawnee, KS 66282-2205
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442
www.phytotechlab.com

EMERGENCY PHONE NUMBER: 1-800-535-5053 - US Only
1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by *Phyto*Technology Laboratories® are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification:

H226 – Flammable liquids (Category 3)
H314 – Skin corrosion (Category 1A)
H318 – Serious eye damage (Category 1)

GHS Label elements, including hazard and precautionary statements:

Pictogram: 

Signal Word: Warning

Hazard Statements:

H22 6 – Flammable liquid and vapour.
H314 – Causes severe skin burns and eye damage.
H318 – Causes serious eye damage.

Precautionary Statements:

P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Ethanoic Acid

CAS No.: 64-19-7

Formula: $C_2H_4O_2$

Molecular Weight: 60.05 g/mol

EC No.: 200-580-7

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

4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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.**

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.
Special Protective Equipment and Precaution for Firefighters:	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.
Hazardous Combustion Products:	May emit toxic fumes under fire conditions.
Toxic Gases Produced:	Carbon dioxide and carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid breathing vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Method of Containment and Cleanup:	Clean-up personnel should wear proper protective equipment and clothing. Contain spilled material and do not let product enter drains. Soak up with inert absorbent material and place in a suitable, closed container for disposal in accordance with all local, state/provincial, and national requirements. Ventilate the area if necessary. Do not let products enter drains.

7. HANDLING AND STORAGE

Precaution for Safe Handling:	Avoid contact with skin and eyes. Avoid incompatible substances. Wash thoroughly after use.
Conditions for Safe Storage:	Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Product is moisture sensitive.
Incompatibilities:	Strong oxidizers, strong bases, carbonates, hydroxides, sodium peroxide, many oxides, phosphates, chromic acid, perchloric acid.
Recommended Storage Temperature:	Room Temperature

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs):	No data available
ACGIH's Threshold Limit Values (TLVs):	10 ppm
Engineering Controls:	Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

Eye/Face Protection:	Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.
Skin Protection:	Protective gloves
Body Protection:	Lab coat
Respiratory Protection:	Wear appropriate respirator

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to slight yellow tint, clear liquid
pH (Neat):	~1.0 – 3.0
Solubility:	Miscible with Water
Melting Point:	16.7 °C (Contracts slightly on freezing)
Vapor Density:	No data available
Vapor Pressure:	73.3 hPa (55.0 mmHg) at 50.0 °C (122.0 °F) 15.2 hPa (11.4 mmHg) at 20.0 °C (68.0 °F)
Odor:	Strong pungent odor
Odor Threshold:	No data available
Viscosity:	No data available
Relative Density:	1.049 g/cm3 at 25 °C (77 °F)
Evaporation Rate:	No data available
Initial Boiling Point and Boiling Range:	117 - 118 °C (243 - 244 °F) - lit
Flammability (solid, gas):	No data available
Partition coefficient: n-octanol/water):	log Pow: -0.17
Auto-ignition Temperature:	485.0 °C (905.0 °F) No data available
Decomposition Temperature:	No data available
Flash Point (Closed Cup):	40.0 °C (104.0 °F)
Flammable Limits:	Upper (%) – No data available Lower (%) – No data available

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions of use. Acetic acid contracts slightly upon freezing which may cause the container to burst.
Possibility of Hazard Reactions:	Will not occur
Conditions to Avoid:	Incompatibles, protect from freezing
Incompatibles Materials:	Strong oxidizers, strong bases, carbonates, hydroxides, sodium peroxide, many oxides, phosphates, chromic acid, perchloric acid.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide

11. TOXICOLOGICAL INFORMATION

Toxicity:	LD_{50} (Oral-Rat)(mg/Kg):	3310
	LD_{50} (Dermal-Rabbit)(mg/Kg):	1112

	LD_{50} (IVN-Mouse)(mg/Kg):	525
Carcinogenicity:	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No

Reproductive Toxicity: No data available

Symptoms Associated with Overexposure: Irritation, itching, gastrointestinal upset, corrosion of tissue and enamel, vomiting, hematemesis, circulatory problems, uremia, bronchitis, or death

Specific Target Organ Toxicity:	Single Exposure:	No data available
	Repeated Exposure:	No data available

Target Organs: Eyes, kidneys, lungs, skin, teeth, stomach

Medical Conditions Aggravated By Exposure: Pre-existing conditions

Routes of Entry: Ingestion, inhalation, skin and eye contact

NIOSH/RTECS NO: AF1225000

The toxicological properties of this product have not been thoroughly investigated

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and Degradability: No data available

Bioaccumulative Potential: Biochemical Oxygen Demand: 880 mg/g

Mobility in Soil: No data available

Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATION

Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

EPA Hazardous Waste Number: No data available

14. TRANSPORT INFORMATION

Domestic (D.O.T.):	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A

International:

IMDG:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A
IATA:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A

UN/NA:	N/A
Labels:	N/A

15. REGULATORY INFORMATION

TSCA:	Yes
SARA TITLE III:	
Section 302 (EHS) Ingredients:	No
Section 313 Ingredients:	Yes
Section 304 (EHS/CERCLA) Ingredients:	Yes
Section 311/312 Hazard:	Acute Health Hazard, Chronic Health Hazard, Fire Hazard
Massachusetts Right to Know Components:	CAS No.: 64-19-7 Acetic acid
Pennsylvania Right to Know Components:	CAS No.: 64-19-7 Acetic acid
New Jersey Right to Know Components:	CAS No.: 64-19-7 Acetic acid
California Prop. 65 Components:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating:	**Health Hazard**	**Chronic Health Hazard**	**Flammability**	**Physical Hazard**
	2	*	2	0
NFPA Rating:	**Health Hazard**	**Fire Hazard**	**Reactivity Hazard**	**Special Hazard**
	3	2	0	

*Chronic Hazard: Chronic (long-term) health effects may result from repeated overexposure.

***Phyto*Technology Laboratories® provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. *Phyto*Technology Laboratories® shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.**

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