

## 1. Product and Company Identification

Product Codes: 40-4028-XX  
Product Name: Cap Mix B  
Product Use: For Research Use Only  
Manufacturer Information  
Company Name: Glen Research LLC  
22825 Davis Drive, #100  
Sterling, VA 20164 USA  
+1-703-437-6191  
Phone Number:  
Web Site Address: www.glenresearch.com  
Email Address: msds@glenres.com  
Information in case of emergency: Chemtrec, 800-424-9300; Outside USA +1-703-527-3887

## 2. Hazards Identification



**Pictograms:**

**Signal Words:** Danger

### GHS Hazard Statements

H225: Highly Flammable Liquid and Vapor.  
H290: May be corrosive to metals  
H302+312+332: Harmful if swallowed, in contact with skin, or if inhaled.  
H314: Causes severe skin burns and eye damage.

### GHS Precautionary Statements

P103: Read label before use.  
P210: Keep away from heat/sparks/open flames/hot surfaces – No Smoking.  
P233: Keep container tightly closed.  
P260: Avoid breathing fumes or vapors.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only in a well ventilated area.  
P280: Wear protective gloves / protective clothing / eye protection / face protection.

### GHS Response Statements

P301+330: IF SWALLOWED: Rinse mouth with water.  
P302+350: IF ON SKIN: Gently wash with soap and water.  
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so - continue rinsing.  
P306+360: IF ON CLOTHING: Rinse contaminated clothing and skin immediately with plenty of water before removing clothes.  
P310: Immediately Call a POISON CENTER or doctor/physician.  
P362: Take off contaminated clothing and wash before use.

### GHS Storage and Disposal Phrases

P403+233: Store in a well-ventilated place. Keep container tightly closed.  
P501: Dispose of contents / container in a safe way in accordance with all federal, state and local regulations.

### Emergency Overview

Flammable Liquid, Corrosive, Target organ effect, Harmful by ingestion, Harmful by skin absorption, Irritant

### Target Organs

Respiratory System, Cardiovascular System, Blood, Kidney, Liver, Central Nervous System

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**3. Composition/Information on Ingredients**

Product Name	CAS #	EC-No	Concentration	M.W.	Formula
Acetonitrile	75-05-8	200-835-2	50%	41.05 g/mol	C <sub>2</sub> H <sub>3</sub> N
Acetic Anhydride	108-24-7	203-564-8	20%	102.09 g/mol	C <sub>4</sub> H <sub>6</sub> O <sub>3</sub>
2,6-Lutidine	108-48-5	203-587-3	30%	107.15 g/mol	C <sub>7</sub> H <sub>9</sub> N

**4. First Aid Measures**

**Emergency and First Aid Procedures**

**If inhaled:**

Remove to fresh air.  
If not breathing, give artificial respiration. Get medical attention.

**In case of skin contact:**

Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Wash clothing before reuse. Get medical attention.

**If swallowed:**

Rinse mouth with water. Do not induce vomiting. Get medical attention.

**If in contact with eyes:**

Rinse cautiously with water for several minutes. Remove contact lenses if present and safe to do so. Continue rinsing. Get medical attention.

**Signs and Symptoms of Exposure**

Burning sensation, Cough, Wheezing, Laryngitis, Shortness of Breath, Nausea, Vomiting, Headache, Hypersalivation, Chest pain or tightness, Profuse sweating, Abdominal pain and hematemesis, Weakness, Stupor, Respiratory depression, Metabolic acidosis, Convulsions, Tachycardia, Shock, Eye irritation. Material may be destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

**Treatment**

Treat as cyanide poisoning. Delayed health effects possible. The onset of symptoms is generally delayed pending conversion to cyanide in the body.

**5. Fire Fighting Measures**

**Suitable Extinguishing Media**

Use a Class A Extinguisher (Dry chemical, carbon dioxide, water or foam).

**Special protective equipment for fire fighters**

Wear self-contained breathing apparatus (SCBA) for fire fighting if necessary.  
Wear protective clothing to prevent contact with skin and eyes.

**Flammable Properties and Hazards**

Highly flammable liquid and vapor. Vapor may travel distances to sources of ignition.

**6. Accidental Release Measures**

**Personal Precautions**

Avoid breathing vapors. Evacuate personnel to safe areas.

**Protective equipment**

Use personal protective equipment.

**Emergency procedures**

Remove all sources of ignition. Vapors may travel distances to sources of ignition. Ensure adequate ventilation.

**Methods and Material for containment and cleaning up.**

Absorb spillage with sand, absorbent pads. Do not let product enter the drain. Wear impermeable gloves, safety glasses and a lab coat when cleaning up the spill. Dispose of absorbent and spillage in compliance with local and state regulations.

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**7. Handling and Storage**

**Precautions To Be Taken in Handling**

Handle using safe laboratory practices. Avoid all direct contact.

**Recommended Storage**

Controlled room temperature.

**Precautions To Be Taken in Storing**

Keep container tightly closed. Store in well-ventilated place.

**Other Precautions**

Protect from sunlight.

**8. Exposure Controls/Personal Protection**

Product Name	CAS #	OSHA PEL (TWA)	ACGIH TLV	OSHA (STEL)
Acetonitrile	75-05-8	40ppm	20ppm	60ppm
Acetic Anhydride	108-24-7	5ppm	5ppm	N/A
2,6-Lutidine	108-48-5	N/A	N/A	N/A

**Engineering Controls (Ventilation etc.)**

Local exhaust ventilation is usually sufficient.

**Respiratory Equipment (Specify Type)**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Eye Protection**

Safety glasses with side shields. Wear splash resistant goggles or face shield if splashes are likely to occur.

**Protective Gloves**

Impermeable, chemically resistant gloves.

**Other Protective Clothing**

Lab coat, chemical resistant lab coat, protective chemical suit, based on risk assessment of activities.

**Work/Hygienic/Maintenance Practices**

Wash hands after handling. Do not eat, drink, or smoke when using this product.

**9. Physical and Chemical Properties**

Physical State:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Appearance:	Liquid, clear. May become dark after prolonged storage.
Odor:	Sharp pungent or sweet, ether-like odor
Odor Threshold:	170ppm (Acetonitrile)
pH:	No data
Melting Point:	No data
Initial Boiling Point and Boiling Range:	No data
Flash Point:	2.0°C (Acetonitrile)
Specific Gravity:	0.80 g/mL
Evaporation Rate:	No data
Flammability:	Highly flammable
Explosive Limits:	LEL: No data UEL: No data
Vapor Pressure (vs. Air or mm Hg):	No data
Vapor Density (vs. Air = 1):	No data
Solubility in Water:	Fully soluble
Partition Coefficient (n-octanol/water):	No data
Auto-ignition Temperature:	No data
Decomposition Temperature:	No data
Viscosity:	No data
Percent Volatile:	No data

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**10. Stability and Reactivity**

**Reactivity**

Stable material, hazardous polymerization will not occur.

**Chemical Stability:** Unstable [ ] Stable [X]

**Possibility of Hazardous Reactions:**

Vapors may form explosive mixture with air.

**Conditions To Avoid - Instability**

Heat, flames, and sparks. Extremes of temperature and direct sunlight.

**Incompatibility - Materials To Avoid**

Strong oxidizing reagents, alkali metals.

**Hazardous Decomposition or Byproducts**

Oxides of nitrogen, carbon, and hydrogen cyanide may evolve when heated to decomposition.

**11. Toxicological Information**

**Route(s) of Entry:**

Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes

**Acute Toxicity**

No data

**Skin corrosion/irritation**

Severe burns

**Serious eye damage/ eye irritation**

Serious eye damage

**Respiratory or skin sensitization**

No data available

**Germ Cell mutagenicity**

No data available

**Carcinogenicity**

Product Name	CAS #	NTP	IARC	OSHA
Acetonitrile	75-05-8	Not listed	Not listed	Not listed
Acetic Anhydride	108-24-7	Not listed	Not listed	Not listed
2,6-Lutidine	108-48-5	Not listed	Not listed	Not listed

Not anticipated to be carcinogenic.

**Reproductive toxicity**

No data available

**Specific target organ toxicity – single exposure (GHS)**

No data available

**Specific target organ toxicity – repeated exposure (GHS)**

No data available

**Aspiration hazard**

No

**Medical Conditions Generally Aggravated By Exposure**

No data available.

To the best of our knowledge, the toxicological properties of this substance have not been investigated. This product should be handled with the usual care when dealing with chemicals.

**12. Ecological Information**

**Ecotoxicity**

Acetonitrile - Pimephales promelas (fathead minnow) 96-hour LC50 1,000mg/L

**Persistence and degradability**

No data available

**Bioaccumulative potential**

Bioaccumulation of acetonitrile is not anticipated.

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**Mobility in soil**

No data available

**Other adverse effects**

No data available

**13. Disposal Considerations**

**Waste Disposal Method**

Observe all federal, state and local regulations. For Contaminated Packaging - dispose of in compliance with regulations. Contact a licensed professional waste disposal service for proper disposal. Burn in a chemical incinerator equipped with afterburner and scrubber.

**14. Transport Information**

**LAND TRANSPORT (49CFR)**

UN Number – UN2924, Class 3, (8) Packing Group II  
Proper Shipping Name: Flammable Liquid, Corrosive N.O.S. (Acetonitrile, Acetic Anhydride Solution)  
Reportable Quantity (RQ) 5000 lbs (Acetonitrile), 5000 lbs (Acetic Anhydride)  
Marine Pollutant: No  
Poison Inhalation Hazard (PIH): No

**AIR TRANSPORT (ICAO/IATA)**

UN Number – UN2924, Class 3, (8) Packing Group II  
Proper Shipping Name: Flammable Liquid, Corrosive, N.O.S. (Acetonitrile, Acetic Anhydride Solution)

**MARINE TRANSPORT (IMDG/IMO)**

UN Number – UN2924, Class 3, (8) Packing Group II, EMS-No: F-E, S-C  
Proper Shipping Name: Flammable Liquid, Corrosive N.O.S. (Acetonitrile, Acetic Anhydride Solution)  
Marine Pollutant: No

**15. Regulatory Information**

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: Acetonitrile, CAS 75-05-8

**SARA 311/312**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right to Know Components**

Acetonitrile	75-05-8
Acetic Anhydride	108-24-7

**Pennsylvania Right to Know Components**

Acetonitrile	75-05-8
Acetic Anhydride	108-24-7
2,6-Lutidine	108-45-5

**New Jersey Right to Know Components**

Acetonitrile	75-05-8
Acetic Anhydride	108-24-7
2,6-Lutidine	108-45-5

**California Prop. 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. Other Information**

For all other inquiries about this product contact Glen Research at 1-800-327-GLEN or 1-703-437-6191.

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