



# Material Safety Data Sheet

## 1. Product and Company Identification

Product name : **Methyl Acetylene**

Chemical formula : C<sub>3</sub>H<sub>4</sub>

Synonyms : Propyne, Allylene, Propine, 1-Propyne

Company : Specialty Gases of America, Inc  
6055 Brent Dr.  
Toledo, OH 43611

Telephone : 419-729-7732

Emergency : 800-424-9300

## 2. Composition/Information on Ingredients

| Components       | CAS Number | % Volume |
|------------------|------------|----------|
| Methyl Acetylene | 74-99-7    | 100%     |

## 3. Hazards Identification

### Emergency Overview

May cause nervous system depression.

Flammable gas. May cause flash fire. May decompose violently at room temperature.

### Potential Health Effects

Inhalation : Irritation, difficulty breathing, headache, drowsiness, dizziness, loss of coordination, dilated pupils, unconsciousness. May cause convulsion in long term exposure.

Eye contact : Frostbite.

Skin contact : Frostbite.

Ingestion : Ingestion of gas is unlikely.

Chronic Health Hazard : Not applicable.

## 4. First Aid Measures

General advice : None.

Eye contact : Contact with liquid. Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Skin contact : If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

Ingestion : If a large amount is swallowed, get medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

## 5. Fire-Fighting Measures

- Suitable extinguishing media : Regular dry chemical, carbon dioxide.
- Specific hazards : Flammable. Containers may rupture or explode if exposed to heat.
- Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Evacuate if fire gets out of control or containers are directly exposed to fire. Evacuation radius: 500 meters (1/3 mile). Consider downwind evacuation if material is leaking.

## 6. Accidental Release Measures

- Personal precautions : None.
- Environmental precautions : None.
- Methods for cleaning up : Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray. Keep unnecessary people away. Isolate hazard area and deny entry. Remove sources of ignition. Ventilate closed spaces before entering.
- Additional advice : None.

## 7. Handling and Storage

### Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

### Storage

Store in accordance with all current regulations and standards. Store in a cool, dry place. Store in a well-ventilated area. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

## 8. Exposure Controls / Personal Protection

### Exposure limits

- 1000 ppm (1650 mg/m<sup>3</sup>) OSHA TWA  
1000 ppm ACGIH TWA  
1000 ppm (1650 mg/m<sup>3</sup>) NIOSH recommended TWA 10 hour(s)

### Engineering measures

Not available.

### Personal protective equipment

- Respiratory protection : The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.  
1700 ppm – Any supplied-air respirator. Any self-contained breathing apparatus

with a full facepiece.

Escape – Any air-purifying respirator with a full facepiece and an organic vapor canister. Any appropriate escape-type, self-contained breathing apparatus.

For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

|                          |   |  |
|--------------------------|---|--|
| Hand protection          | : | Wear insulated gloves.   |
| Eye protection           | : | For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. |
| Skin and body protection | : | For the gas: Protective clothing is not required. For the liquid: Wear appropriate, protective, cold-insulating clothing.  |
| Ventilation              | : | Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.  |
| Remarks                  | : | None.  |

## 9. Physical and Chemical Properties

|                    |   |  |
|--------------------|---|--|
| Form               | : | Liquefied gas.                         |
| Color              | : | Colorless.                             |
| Odor               | : | Sweet odor.                            |
| Molecular weight   | : | 40.07                                  |
| Vapor pressure     | : | 3876 mmHg @ 20 C                       |
| Vapor density      | : | 1.4 (air = 1)                          |
| Specific gravity   | : | 0.7062 @ -50 C (water = 1)             |
| Boiling point      | : | -9.8 F (-23.2 C) @ 760 mmHg            |
| Freezing point     | : | -152.9 F (-102.7 C)                    |
| Water solubility   | : | 3.640 mg/mL @ 25 C (slightly soluble)  |
| Solvent solubility | : | Soluble: alcohol, benzene, chloroform. |

## 10. Stability and Reactivity

|                                  |   |   |
|----------------------------------|---|---|
| Stability                        | : | May decompose violently at room temperature.  |
| Conditions to avoid              | : | Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat. |
| Materials to avoid               | : | Oxidizing materials, metals, halogens, copper, copper alloys, chlorine.   |
| Hazardous decomposition products | : | Thermal decomposition products: oxides of carbon.   |

## 11. Toxicological Information

### Target organs

Central nervous system

### Acute Health Hazard

|            |   |                |
|------------|---|----------------|
| Ingestion  | : | Not available. |
| Inhalation | : | Not available. |
| Skin       | : | Not available. |

## 12. Ecological Information

Fate and transport : KOC: 10 (log = 1.00)  
Henry's law constant : 1.1 E -2  
Bioconcentration : 0.35 (estimated from KOC)  
Environmental summary : Leaches through the soil or the sediment at a very rapid rate. Accumulates very little in the bodies of living organisms. Highly volatile from water.

## 13. Disposal Considerations

Waste from residues / unused products : Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003.  
Contaminated packaging : Return cylinder to supplier.

## 14. Transport Information

### DOT (US only)

Proper shipping name : Compressed gas, flammable n.o.s. (METHYL ACETYLENE)  
Class : 2.1  
UN/ID No. : UN1954  
Labeling : Flammable Gas

### Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

## 15. Regulatory Information

### OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

Not regulated.

### TCSA

Material is not listed in TSCA inventory.

### SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

### SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

### SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes  
Chronic: No  
Fire: Yes  
Reactive: Yes  
Sudden Release: Yes

### SARA Title III Section 313 (40 CFR 372.65)

Not regulated.

## 16. Other Information

Prepared by : Specialty Gases of America, Inc.  
For additional information, please visit our website at [www.americangasgroup.com](http://www.americangasgroup.com).