



# Material Safety Data Sheet

## 1. Product and Company Identification

Product name : **Acetylene, Dissolved**

Chemical formula : H-C-C-H

Synonyms : Acetylene; Ethyne; Welding Gas; Acetylen; Ethine; Narcylen; Vinylene; UN 1001

Company : Medical-Technical Gases, Inc.  
20 Hall Street  
Medford, MA 02155

Telephone : 800-FINE-GAS

Emergency : 800-424-9300

## 2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Acetylene, Dissolved	74-86-2	100%

## 3. Hazards Identification

### Emergency Overview

May explode when heated. Flammable gas. May cause flash fire. Electrostatic charges may be generated by flow, agitation, etc. May polymerize. Containers may rupture or explode.  
May cause central nervous system depression, difficulty breathing.

### Potential Health Effects

Inhalation : Nausea, vomiting, chest pain, wheezing, headache, drowsiness, dizziness, loss of coordination, bluish skin color, suffocation, lung congestion, coma.

Eye contact : No information on significant adverse effects.

Skin contact : Rash.

Ingestion : Ingestion of a gas is unlikely.

Chronic Health Hazard : Not applicable.

## 4. First Aid Measures

Eye contact : Flush eyes with plenty of water.

Skin contact : Wash exposed skin with soap and water.

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.

Note to physicians : For inhalation, consider oxygen.

## 5. Fire-Fighting Measures

- Suitable extinguishing media : Carbon dioxide, regular dry chemical.  
Large fires: Use regular foam or flood with fine water spray.
- Specific hazards : Severe explosion hazards. Vapor/air mixtures are explosive. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.
- Fire fighting : Move container from fire area if it can be done without risk. 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. Stop flow of gas.

## 6. Accidental Release Measures

- Occupational spill/release : Avoid heat, flames, sparks and other sources of ignition. 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. Protect from physical damage. Store outside or in a detached building. Keep separated from incompatible substances. Store in a cool, dry place. Store in a well-ventilated area. Avoid heat, flames, sparks or other sources of ignition. Grounding and bonding required. Secure to prevent tipping. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101.

## 8. Exposure Controls / Personal Protection

### Exposure limits

NIOSH : 2500 ppm Ceiling; 2662 mg/m<sup>3</sup> Ceiling

### Engineering measures/Ventilation

Ensure compliance with applicable exposure limits. Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present.

### Personal protective equipment

Respiratory protection : Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

For unknown concentrations or immediately dangerous to life or health – Any supplied-air respirator with a full facepiece that is operated in pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Hand protection	:	Protective gloves are not required, but recommended.
Eye protection	:	Eye protection is not required, but recommended.
Skin and body protection	:	Protective clothing is not required.

## 9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Sweet odor.
Molecular weight	:	26.04
Vapor pressure	:	7690 mmHg @ -84°C
Vapor density	:	0.90 (air = 1)
Boiling point	:	Not available.
Freezing point	:	Not available.
Water solubility	:	0.94% @ 25°C
Solvent solubility	:	Soluble: acetone, benzene, chloroform, ether.

## 10. Stability and Reactivity

Stability	:	May decompose violently on heating. May explode when heated.
Conditions to avoid	:	Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Metals, oxidizing materials, halogens, metal carbide, reducing agents, halo carbons.
Hazardous decomposition products	:	Thermal decomposition products: oxides of carbon.

## 11. Toxicological Information

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

### Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

### Target Organs

ACETYLENE, : Central nervous system.  
DISSOLVED (74-86-2)

### Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

## 12. Ecological Information

No LOEL ecotoxicity data are available for this product's components.

## 13. Disposal Considerations

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

## 14. Transport Information

### DOT (US only)

Proper shipping name : Acetylene, dissolved  
Class : 2.1  
UN/ID No. : UN1001  
Labeling : Flammable Gas

## 15. Regulatory Information

### U.S. Federal Regulations

None of this product's components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA 311/312

Acute: Yes  
Chronic: No  
Fire: Yes  
Reactive: Yes  
Pressure: Yes

### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
ACETYLENE, DISSOLVED	74-86-2	Yes	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65