

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

Company : SpecAir Specialty Gases
22 Albiston Way
Auburn, Maine 04210

Telephone : 207-777-6218

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Acetylene	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. 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

General advice : None.

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.

5. Fire-Fighting Measures

- Suitable extinguishing media : Carbon dioxide, regular dry chemical.
- 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

- Personal precautions : None.
- Environmental precautions : None.
- Methods for cleaning up : 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

ACGIH (simple asphyxiant)
2500 ppm (2662 mg/m³) NIOSH recommended ceiling

Engineering measures

Not available.

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 a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

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.
Special instructions for protection and hygiene	:	None.
Remarks	:	None.

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)
Density	:	1.1747 g/L @ 0 C
Specific gravity	:	Not applicable.
Boiling point	:	Not available.
Freezing point	:	Not available.
Water solubility	:	0.94% @ 25 C

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. Minimize contact with material. 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

Acute Health Hazard

Ingestion	:	Not available.
Inhalation	:	Not available.
Skin	:	Not available.
Target organs	:	Central nervous system.

12. Ecological Information

Fate And Transport

KOW	:	2691.53 (log = 3.44) (estimated from water solubility)
KOC	:	4508.17 (log = 3.66) (estimated from water solubility)
Henry's Law	:	2.8 E -3 atm-m ³ /mol

Constant
Bioconcentration : 3.48 (estimated from water solubility)
Aquatic Processes : 1.3269231 hours (River Model: 1 m deep, 1 m/s flow, 3 m/s wind)
Environmental : Relatively non-persistent in the environment. Not expected to leach through the
Summary soil or the sediment. Accumulates very little in the bodies of living organisms.
Highly volatile from water.

13. Disposal Considerations

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

14. Transport Information

DOT (US only)

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