

Safety Data Sheet

Acetylene

United States Cylinder Gas
11618 S Mayfield Ave., Alsip, Illinois, 60803
Emergency Phone: CHEMTREC 1-800-424-9300
www.uscylgas.com

Section 1: Product and Company Identification

United States Cylinder Gas
11618 S Mayfield Ave., Alsip, Illinois, 60803
(708) 389-1402
Emergency Phone: CHEMTREC 1-800-424-9300
www.uscylgas.com

Product Code: **Acetylene**
Part Number: ACEMC, ACEB, ACE135, ACE350
Synonyms: Acetylen
Recommended Use: Industrial use. Use as directed.
Usage Restrictions:

Section 2: Hazards Identification



Hazard Classification: Flammable (Category 1), H220
Gases Under Pressure, H280
Simple Asphyxiant, OSHA-H01

Hazard Statements: H220: Extremely flammable gas
H280: Contains gas under pressure; may explode if heated
CGA-HG04: MAY FORM EXPLOSIVE MIXTURES WITH AIR.
OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Precautionary Statements

P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271+P403: Use and store only outdoors or in a well-ventilated place.
P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381: In case of leakage, eliminate all ignition sources.
CGA-PG02: Protect from sunlight when ambient temperature exceeds 52C (125F).
CGA-PG05: Use a back flow preventive device in the piping.
CGA-PG06: Close valve after each use and when empty.
CGA-PG10+CGA-PG20: Use only with equipment of compatible materials of construction and rated for cylinder pressure.
CGA-PG11: Never put cylinders into unventilated areas of passenger vehicles.
CGA-PG12: Do not open valve until connected to equipment prepared for use.
CGA-PG13: Fusible plugs in top, bottom, or valve melt at 98C to 107C (208F to 224F).

Do not discharge at pressures above 15 psi (103 kPa).
CGA-PG27: Read and follow the Safety Data Sheet (SDS) before use.

Section 3: Composition/Information on Ingredients

| | CAS # | Concentration |
|-----------|---------|---------------|
| Acetylene | 74-86-2 | 100% |

| | Trade Names |
|-----------|---|
| Acetylene | ACETYLENE Ethyne Acetylen Narcylen Ethine Vinylene |

Section 4: First Aid Measures

IF ON SKIN: wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media:

Dry powder, carbon dioxide, cool surrounding area with fine water mist.

Protection of Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

| | Products of Combustion |
|-----------|------------------------|
| Acetylene | Hydrogen |

Section 6: Accidental Release Measures

Personal Precautions:

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.

Environmental Precautions:

Keep away from drains, surface and ground water. Avoid heat, flames, sparks and other sources of ignition.

Methods for Containment and Cleanup:

Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition. If necessary, cover drains.
Absorb large spills, dispose in appropriate containers.

Section 7: Handling and Storage

Handling:

See precautions in Section 2. Only trained personnel should handle this product. Always use approved personal protective equipment.

Storage:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep separated from incompatible substances.

| | Incompatibilities | Conditions to avoid |
|------------------|---|---|
| Acetylene | Metals, halogens, oxidizing materials, metal carbide, reducing agents, halo carbons BRASS. CALCIUM HYPOCHLORITE, COPPER, MERCURY AND SILVER SALTS, HALOGENS, HEAVY METALS, HYDRIDES, LIQUID NITROGEN, NITRIC ACID , OXYGEN, OZONE, PERCHLORIC ACID, POTASSIUM | Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. |

Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines | Threshold Limit Value -TLV (ppm) |
|---------------------|----------------------------------|
| Acetylene | Not Available |

Engineering Controls

No specific controls are needed.

Eye Protection

Wear splash resistant safety goggles.

Skin Protection

Wear chemical protective clothing, including gloves.

Respiratory Protection

Use self-contained breathing apparatus.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

| | Physical State / Physical Form | Appearance / Color | Odor | Flash Point | Flammability | Partition Coefficient |
|------------------|--------------------------------|--------------------|------------|--|--------------|-----------------------|
| Acetylene | Gas | Colorless | Sweet odor | Flammable gas. Can be ignited at all normal temperatures. A flash point of 0 F (-18 C) (CC) has been reported. | True | 0 |

| | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits | Boiling Point | Freezing Point | Vapor Pressure |
|------------------|--------------------------|------------------------|------------------------|--|----------------|----------------|
| Acetylene | 581 F (305 C) | 81 | 2.3 | -103 F (-75 C) @ 170 kPa abs (24.7 psi abs) or 69 kPa gage (10 psi gage) | Not available | 31.42857 |

| | Vapor Density | Specific Gravity | Water Solubility | pH | Evaporation Rate | Viscosity |
|------------------|---------------|------------------|------------------|----|------------------|-----------------|
| Acetylene | 0.9 | Not applicable | 0.94% @ 25 C | 0 | Not applicable | 0.010 cP @ 20 C |

| | Molecular Weight | Molecular Formula | Density | Volatility | Solvent Solubility |
|------------------|------------------|-------------------|---------------|----------------|---|
| Acetylene | 26.038 | H-C-C-H | Not Available | Not applicable | Soluble : Acetone, benzene, chloroform, ether |

Section 10: Stability and Reactivity

| | Stability | Conditions to Avoid | Incompatible Materials |
|-----------|--|---|--|
| Acetylene | May decompose violently on heating. May explode when heated. | Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. | Metals, halogens, oxidizing materials, metal carbide, reducing agents, halo carbons BRASS. CALCIUM HYPOCHLORITE, COPPER, MERCURY AND SILVER SALTS, HALOGENS, HEAVY METALS, HYDRIDES, LIQUID NITROGEN, NITRIC ACID, OXYGEN, OZONE, PERCHLORIC ACID, POTASSIUM |
| | Hazardous Decomposition Products | Possibility of Hazardous Reactions | |
| Acetylene | Hydrogen | Polymerizes with evolution of heat. Avoid contact with curing agents, accelerators, and/or initiators. | |

Section 11: Toxicology Information

The toxicology information is calculated for the mixture.

Acute Toxicity Estimates (ATE) of the mixture.

| | |
|----------------------|---------------|
| Oral ATE (mg/kg) | Not Available |
| Inhalation ATE (ppm) | Not Available |
| Dermal ATE (mg/kg) | Not Available |

Additional health hazards:

OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

| | |
|-----------------------------------|---------------|
| Skin Corrosion/Irritation | Not Available |
| Eye Damage/Irritation | Not Available |
| Respiratory or Skin Sensitization | Not Available |
| Germ Cell Mutagenicity | Not Available |
| Carcinogenicity | Not Available |
| Reproductive Toxicity | Not Available |
| STOT – single exposure | Not Available |
| STOT – repeated exposure | Not Available |
| Aspiration Hazard | Not Available |

Section 12: Ecological Information

Fate and Transport

| | Eco toxicity | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment |
|-----------|--|---|--|---|
| Acetylene | Fish toxicity: 0 Invertebrate toxicity: Algal toxicity: Phyto toxicity: Other toxicity: | Relatively non-persistent in the environment. Highly volatile from water. | Accumulates very little in the bodies of living organisms. | Not expected to leach through the soil or the sediment. |

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Do not dispose in sewers or waterways. Recycle if possible to do so. Return to manufacturer for disposal if needed.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

| | Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
|-----------|----------------------|-----------|--------------------------|---------------|--|--|---------------------------------|
| Acetylene | Acetylene, dissolved | UN1001 | 2.1 | Not available | Not available | Not available | Not available |

Canadian Transportation of Dangerous Goods

| | Shipping Name | UN Number | Class | Packing Group / Risk Group |
|-----------|----------------------|-----------|-------|----------------------------|
| Acetylene | Acetylene, dissolved | UN1001 | 2.1 | Not Available |

Section 15: Regulatory Information

U.S. Regulations

| | CERCLA Sections | SARA 355.30 | SARA 355.40 |
|-----------|-----------------|----------------|----------------|
| Acetylene | Not Regulated. | Not Regulated. | Not Regulated. |

SARA 370.21

| | Acute | Chronic | Fire | Reactive | Sudden Release |
|-----------|-------|---------|------|----------|----------------|
| Acetylene | Yes | No | Yes | Yes | Yes |

SARA 372.65

| | |
|-----------|----------------|
| Acetylene | Not Regulated. |
|-----------|----------------|

OSHA Process Safety

| | |
|-----------|----------------|
| Acetylene | Not regulated. |
|-----------|----------------|

State Regulations

| | CA Proposition 65 |
|-----------|-------------------|
| Acetylene | Not regulated. |

Canadian Regulations

| | WHMIS Classification |
|-----------|----------------------|
| Acetylene | A, B1 |

National Inventory Status

| | US Inventory (TSCA) | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
|-----------|---------------------|------------------------------|-----------------------------|
| Acetylene | Ethyne | Not listed. | Listed on DSL. |

Section 16: Other Information

| | NFPA Rating |
|-----------|---|
| Acetylene | Health = 0, Flammability = 4, Instability = 3 |

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard