

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

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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.
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OSHA Process Safety

Acetylene	Not regulated.
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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/NDL)
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