Safety Data Sheet

Acetylene, dissolved

US Cylinder Gas
Alsip, IL

Section 1: Product and Company Identification

US Cylinder Gas
Alsip, IL
Product Code: **Acetylene**
Part Number: 74-86-2

Synonyms: Acetylene
Recommended Use: Industrial use. Use as directed
Usage Restrictions:

Section 2: Hazards Identification

Danger

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: Eliminate all ignition sources if safe to do so.
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 #
74-86-2

Chemical Substance	Chemical Family	Trade Names
ACETYLENE, DISSOLVED	Hydrocarbons, Aliphatic, Unsaturated	ACETYLENE; ETHYNE; WELDING GAS; ACETYLEN; ETHINE; NARCYLEN; VINYLENE; UN 1001; C2H2

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Gas: Not applicable. Liquid: If it is safe to do so, remove victim to an uncontaminated area, and place them in a comfortable position to wait for medical attention. Immediately remove contaminated clothes and shoes. Cleanse the affected skin areas thoroughly with soap under running water for 15 minutes. Seek medical treatment.	Gas: Not applicable. Liquid: Rinse the affected eye thoroughly for 10 minutes under running water. Seek immediate medical treatment.	Swallowing is not a likely route of exposure. Seek medical treatment. Do not induce vomiting.	If it is safe to do so, remove victim to fresh air, and place them in a comfortable position to wait for medical attention. Administer oxygen or artificial respiration if breathing is difficult. Seek immediate medical treatment.	For inhalation, consider oxygen.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray.	Oxides of carbon	▪ Respiratory protection may be needed for frequent or heavy exposure. ▪ Any self-contained breathing apparatus with a full facepiece.

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

Methods for Cleanup	Other Information
Evacuate, stop leak if possible. Remove sources of ignition.	None

Section 7: Handling and Storage

Handling	Storage
Keep container tightly closed in a locked area. Protect from sunlight. Protect from ignition sources. Secure cylinders upright to keep them from falling or being knocked over. Store only where temperature will not exceed 125 degrees F (52 degrees C).	Always handle in a well ventilated area. Use only in closed systems. Open valve slowly. Close cylinder valve after each use; keep closed even when empty. Avoid contact with skin and eyes. Keep away from heat and ignition sources.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
ACETYLENE, DISSOVED: ACETYLENE: ACGIH (simple asphyxiant) 2500 ppm (2662 mg/m3) NIOSH recommended ceiling

Engineering Controls

Handle only in fully enclosed systems.

Eye Protection	Skin Protection	Respiratory Protection
Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and shower in work area.	Wear appropriate chemical resistant clothing. Wear appropriate gloves.	Respiratory protection may be needed for frequent or heavy exposure.

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	Appearance	Color	Change in Appearance	Physical Form	Odor
Gas	Colorless	Colorless	N/A	Liquefied Gas	Sweet odor

Taste	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits
N/A	Flammable gas. Can be ignited at all normal temperatures. A flash point of 0 F (-18 C) (CC) has been reported.		2691.53 (log = 3.44) (estimated from water solubility)	581 F (305 C)	81%; 100% if there is a substantial energy ignition source, and under certain conditions of pressure, container size and shape.

Lower Explosive Limits	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity
0.025	-103 F (-75 C) @ 170 kPa abs (24.7 psi abs) or 69 kPa gage (10 psi gage)	Not available	760 mmHg @ -84 C	0.9 (Air=1)	Not applicable

Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity	Molecular Weight
0.94% @ 25 C	Not applicable	240 mg/m3 (226 ppm) (detection) (4); 657 mg/m3 (620 ppm) (not specified) (8) 1300-2750 mg/m3 (1222-2585 ppm) (not specified)	Not applicable	0.010 cP @ 20 C	26.04

Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility

Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
H-C-C-H	1.1747 g/L @ 0 C	Not available	Not available	Not applicable	Soluble : Acetone, benzene, chloroform, ether

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
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
Hydrogen	Polymerizes with evolution of heat. Avoid contact with curing agents, accelerators, and/or initiators.

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not established	Not established	Central nervous system depression, difficulty breathing, asphyxiant nausea, vomiting, chest pain, wheezing, headache, drowsiness, dizziness, loss of coordination, bluish skin color, suffocation, lung congestion, coma

Eye Irritation	Skin Irritation	Sensitization
No information on significant adverse effects	Rash	

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not established	Not established	Not established	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: Not available Invertibrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	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. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Acetylene, dissolved	UN1001	2.1	Not applicable	2.1	Forbidden	15 kg	N/A

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Acetylene, dissolved	UN1001	2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
Not regulated.	Not regulated.	Not regulated.

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	Yes	Yes	Yes

SARA 372.65

Not regulated.

OSHA Process Safety

Not regulated.

State Regulations

CA Proposition 65
Not regulated.

Canadian Regulations

WHMIS Classification
A, B1

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

NFPA Rating
HEALTH=0 FIRE=4 REACTIVITY=3

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