

ACCORDING TO US CFR 1910.1200

1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

| | |
|--------------|---|
| Product Name | ACETYLENE, DISSOLVED. |
| Synonym(s) | ACETYLENE, TECHNICAL; Ethyne; Ethine; Narcylen; C2H2; Acetylen; UN 1001; Vinylene |
| CAS No. | 74-86-2 |
| EC No. | 200-816-9 |

1.2 Relevant identified uses of the substance or mixture and uses advised against

| | |
|----------------------|---|
| Identified Use(s) | Industrial gas. Synthetic/Analytical chemistry. |
| Uses Advised Against | Not known. |

1.3 Details of the supplier of the safety data sheet

| | |
|------------------------|--|
| Company Identification | Hudson Technologies Company |
| Address | PO Box 1541 One Blue Hill Plaza Pearl River, New York USA |
| Postal code | 10965 |
| Telephone | +1 (800) 953 2244 |
| Fax | +1 (845) 512 6070 |
| E-mail | information@hudsontech.com |

1.4 Emergency telephone number

| | |
|-----------------|-------------------|
| Company | +1 (800) 501 4376 |
| CHEMTREC (U.S.) | +1 (800) 424 9300 |
| INTERNATIONAL | +1 (703) 527 3887 |

2. SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

| | |
|------------------|--|
| US CFR 1910.1200 | Flam. Gas 1: Extremely flammable gas. Gases under pressure; Press. Gas; Compressed dissolved gas. |
|------------------|--|

2.2 Label elements

Product Name ACETYLENE, DISSOLVED.

Hazard Pictogram(s)



GHS02



GHS04

Signal Word(s) Danger .

Hazard Statement(s)

H220: Extremely flammable gas.
 H231: MAY REACT EXPLOSIVELY EVEN IN THE ABSENCE OF AIR AT ELEVATED PRESSURES AND/OR TEMPERATURE.
 H280: Contains gas under pressure; may explode if heated.
 OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.
 CGA-HG04: MAY FORM EXPLOSIVE MIXTURES WITH AIR.

Precautionary Statement(s)

P202: Do not handle until all safety precautions have been read and understood.
 P210: Keep away from heat, open flames, sparks, hot surfaces. – No smoking.
 P271+P403: Use and store only outdoors or in a well-ventilated place.
 P304, P340, P313: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.
 P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
 P381: Eliminate all ignition sources if safe to do so.
 P501: Dispose of contents/container in accordance with container supplier/owner instructions.

2.3 Other hazards

Explosive with or without contact with air.
 May cause asphyxiation when concentrations are sufficient to reduce oxygen below safe breathing levels.

2.4 Additional Information

CGA-PG05: Use a back flow preventive device in the piping.
 CGA-PG13: Fusible plugs in top, bottom, or valve melt at 98 °C to 107 °C (208 °F to 224 °F). Do not discharge at pressures above 15 psi (103 kPa).
 CGA-PG06: Close valve after each use and when empty.
 CGA-PG11: Never put cylinders into unventilated areas of passenger vehicles.
 CGA-PG02: Protect from sunlight when ambient temperature exceeds 52 °C (125 °F).
 CGA-PG27: Read and follow the Safety Data Sheet (SDS) before use.
 This SDS is available in languages other than English.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| HAZARDOUS INGREDIENT(S) | Common Names | CAS No. | %W/W | Hazard Statement(s) | Hazard Pictogram(s) |
|-------------------------|---|---------|------|---|---------------------|
| Acetylene | Ethyne; Ethine; Narcylen; C ₂ H ₂ ; Acetylen; UN 1001; Vinylene | 74-86-2 | 100 | Flam. Gas 1; H220 Press. Gas; Compressed dissolved gas; H280 | GHS02 GHS04 |

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing has stopped, apply artificial respiration. Get medical attention.

Skin Contact: Wash skin with water.

Eye Contact: Flush eyes with water for at least 15 minutes.

Ingestion: Unlikely route of exposure.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: High concentrations: Loss of coordination, Unconsciousness.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. SECTION 5: FIREFIGHTING MEASURES

Extremely flammable gas. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

5.1 Extinguishing media

Suitable Extinguishing media Extinguish preferably with dry chemical.

Unsuitable extinguishing media None known.

5.2 Special hazards arising from the substance or mixture

Contains gas under pressure; may explode if heated. Explosive with or without contact with air. Heating may cause an explosion. Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide.

5.3 Advice for fire-fighters

Evacuate area and fight fire remotely due to the risk of explosion. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions. Keep containers cool by spraying with water if exposed to fire.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate area. Eliminate all ignition sources if safe to do so. Shut off leaks if without risk. Ensure adequate ventilation. Avoid breathing gas. Wear appropriate personal protective equipment, avoid direct contact.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up

Allow small spillages to evaporate provided there is adequate ventilation.

6.4 Reference to other sections

See Also Section 8, 13.

7. SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide sufficient ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing gas. Use non-sparking hand tools and explosion proof electrical equipment. Wear suitable respiratory protection. Do not drag, roll, slide or drop cylinders. Use a suitable hand truck design for cylinder movement. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object into valve cap openings. Doing so may damage valve causing a leak to occur. Secure cylinders in an upright position at all times, close all valves when not in use. Keep closed even when empty. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Protect from sunlight. Store in a well-ventilated place.

Storage temperature

<125°F (52°C)

Storage life

Stable under normal conditions.

Incompatible materials

Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 65% copper. Air, Oxidising agents. Do not use alloys containing more than 43% silver.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

NIOSH REL (United States, 1/2013).

CEIL: 2662 mg/m³

CEIL: 2500 ppm

8.2 Exposure controls

Appropriate engineering controls

Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure adequate ventilation.

Personal protection equipment



Eye Protection

Wear suitable eye/face protection.



Skin protection

Wear suitable gloves.



Respiratory protection

Wear suitable respiratory protective equipment if exposure to high levels of material is likely.

Thermal hazards

Not applicable.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Appearance | Gas. |
| Color: | Colorless. |
| Odor | Garlic odor. |
| Odor threshold | Not established. |
| pH | Not applicable. |
| Melting point/freezing point | -113.44°F (-80.8°C) |
| Initial boiling point and boiling range | -119.2°F (-84°C) |
| Flash Point | Closed cup: -18.15°C (-0.67°F) |
| Evaporation rate | Not applicable. |
| Flammability (solid, gas) | Extremely flammable gas. |
| Upper/lower flammability or explosive limits | 2.5 - 100Vol-% |
| Vapor pressure | 4400kPa |
| Vapor density | 0.907 (Air = 1) |
| Relative density | 0.9 |
| Solubility(ies) | Solubility (Water): Soluble in water. (1185 mg/l) Solubility (Other): Not available. |
| Partition coefficient: n-octanol/water | 0.37 |
| Auto-ignition temperature | 581°F (305°C) |
| Decomposition Temperature (°C) | 1175°F (635°C) |
| Viscosity | Not applicable. |



Explosive properties Explosive with or without contact with air.
Oxidizing properties Not oxidizing.

9.2 Other information

Molecular weight 26 g/mol
Sublimation Temperature -117.94°F (-83.3°C)

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

May react explosively even in the absence of air at elevated pressure and/or temperature.

10.4 Conditions to avoid

Keep away from heat and sources of ignition. High pressure.

10.5 Incompatible materials

Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 65% copper. Air, Oxidizing agents. Do not use alloys containing more than 43% silver.

10.6 Hazardous decomposition product(s)

No hazardous decomposition products known.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion Low acute toxicity.

Acute toxicity - Skin Contact Low acute toxicity.

Acute toxicity - Inhalation Low acute toxicity.

LC50 (rat) = 780000 - 900000ppm

Skin corrosion/irritation Contact with rapidly expanding gas may cause burns or frostbite.

Serious eye damage/irritation Contact with rapidly expanding gas may cause burns or frostbite.



| | |
|--------------------------------|--|
| Skin sensitization data | Not classified. |
| Respiratory sensitization data | Not classified. |
| Germ cell mutagenicity | There is no evidence of mutagenic potential. |
| Carcinogenicity | No evidence of carcinogenicity. |
| Reproductive toxicity | Not classified. |
| Lactation | Not classified. |
| STOT - single exposure | None anticipated. |
| STOT - repeated exposure | None anticipated. |
| Aspiration hazard | Not classified. |
| 11.2 Other information | Not known. |

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

| | |
|----------------------------------|--------------------------------|
| Toxicity - Aquatic invertebrates | Low toxicity to invertebrates. |
| Toxicity - Fish | Low toxicity to fish. |
| Toxicity - Algae | Low toxicity to algae. |
| Toxicity - Sediment | Not classified. |
| Compartment | |
| Toxicity - Terrestrial | Not classified. |
| Compartment | |

12.2. Persistence and Degradation

Not readily biodegradable.

12.3. Bioaccumulative potential

The product has low potential for bioaccumulation.

12.4. Mobility in soil

Not applicable.

12.5 Other adverse effects

None anticipated.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Containers must not be punctured or destroyed by burning, even when empty. Waste gas should be flared through a suitable burner with flash back arrestor. Refer to manufacturer/supplier for information on recovery/recycling.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

14. SECTION 14: TRANSPORT INFORMATION

14.1 UN number

UN No. 1001

14.2 UN proper shipping name

UN proper shipping name ACETYLENE, DISSOLVED

14.3 Transport hazard class(es)

ADR/RID Class 2.1
 IMDG Class 2.1
 IMDG EMS Not available

ICAO/IATA

Excepted Quantities E0
 Passenger and Cargo Aircraft Forbidden for transport by air.

Limited Quantities Packing

Instructions

Passenger and Cargo Aircraft Forbidden for transport by air.

Limited Quantities Max net Qty

Passenger and Cargo Aircraft Forbidden for transport by air.

Max net Qty

Passenger and Cargo Aircraft Forbidden for transport by air.

Max net Qty

Special Provisions A1
 Emergency Response 10L

Guidebook (ERG) Code

ADR Classification Code 4F
 ADR HIN 239

ADR Transport Category 2

Tunnel Restriction Code B/D

Emergency Action Code 2SE

Advice on Additional Personal Not applicable

Protection (APP)

14.4 Packing group

Packing group Not applicable

Labels 2.1



Special Provisions Not applicable

Limited Quantities 0

Excepted Quantities E0

Mixed Packing Instructions for Packages P200

Special Packing Provisions for Packages Not applicable

Mixed Packing Instructions for Packages MP9

14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Packing Instructions for Portable Tanks Not applicable

Tanks

Special Provisions for Portable Tanks Not applicable

Tanks

Tank Code for Tanks PxBN(M)

Special Provisions for Tanks TU17 TA4 TT9

Vehicle for Tank Carriage FL

Special Provisions for Carriage - Packages Not applicable

Special Provisions for Carriage - Bulk Not applicable

Bulk

Special Provisions for Carriage - Loading, Unloading and Handling CV9 CV10 CV36

Special Provisions for Carriage - Operation S2

Special Provisions for Carriage - Operation S2

Operation

15. SECTION 15: REGULATORY INFORMATION

15.1 Federal



Toxic and hazardous substances Not listed.

(29 CFR 1910; Subpart Z)

National emission standards for Not listed.

hazardous air pollutants (40 CFR

61.01)

Title III Consolidated List of Lists Acetylene (CAS No.: 74-86-2)

TSCA (Toxic Substance Control Acetylene (CAS No.: 74-86-2)

Act)

CAA 602 - Ozone Depleting Not listed.

Substances (ODS)

15.2 State

State Right to Know Lists Listed in: New Jersey, Pennsylvania, Massachusetts.

Proposition 65 (California) Not listed.

15.3 Other

OSPAR List of Chemicals for Not listed.

Priority Action

NTP (National Toxicology Not listed.

Program)

OSHA Not listed.

(List of Highly Hazardous

Chemicals, Toxics and

Reactives)

IARC (International Agency for Not listed.

Research on Cancer)

16. SECTION 16: OTHER INFORMATION

The following sections contain 1-16
revisions or new statements:

| | |
|------|------|
| NFPA | HMIS |
|------|------|

| | | | |
|-------------|---|------------------|---|
| Health | 0 | Health | 2 |
| Fire | 4 | Flammability | 4 |
| Instability | 2 | Physical hazards | 2 |

LEGEND:

Hazard Pictogram(s)



GHS02

Hazard Statement(s)



GHS04

H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

P410+P403: Protect from sunlight. Store in a well-ventilated place.

Additional Information required by Federal Standard 313 Rev. E:

Contract or Solicitation Number: SPE4A6-16-D-0226

Number:

Prime Contractor: Hudson Technologies, Inc.

Prime Contractor CAGE: 7DSQ0

National Stock Number (NSN): 6830002920137

Specification Reference:

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SAFETY DATA SHEET

11-Jul-2017

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