



MATHESON

ask...The Gas Professionals™

Safety Data Sheet

Material Name: ACETYLENE, DISSOLVED

SDS ID: MAT00280

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: ACETYLENE, DISSOLVED

Manufacturer Information

MATHESON TRI-GAS, INC.
150 Allen Road, Suite 302
Basking Ridge, NJ 07920

General Information: 1-800-416-2505
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 703-527-3887 (Call collect)

Chemical Family

hydrocarbons, aliphatic

Synonyms

MTG MSDS 1; ACETYLENE; ETHYNE; WELDING GAS; ACETYLEN; ETHINE; NARCYLEN; VINYLENE; UN 1001; C2H2; RTECS: AO9600000

Section 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Color: colorless

Physical Form: gas

Odor: sweet odor

Health Hazards: central nervous system depression, difficulty breathing

Physical Hazards: May explode when heated. Flammable gas. May cause flash fire. Electrostatic charges may be generated by flow, agitation, etc. May polymerize. Containers may rupture or explode.

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: nausea, vomiting, chest pain, wheezing, headache, drowsiness, dizziness, loss of coordination, bluish skin color, suffocation, lung congestion, coma

Long Term: no information on significant adverse effects

Skin

Short Term: rash

Long Term: no information is available

Eye

Short Term: no information on significant adverse effects

Long Term: no information is available

Ingestion

Short Term: ingestion of a gas is unlikely

Long Term: ingestion of a gas is unlikely

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent
74-86-2	ACETYLENE, DISSOLVED	100

Safety Data Sheet

Material Name: ACETYLENE, DISSOLVED

SDS ID: MAT00280

Section 4 - FIRST AID MEASURES

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.

Skin

Wash exposed skin with soap and water.

Eyes

Flush eyes with plenty of water.

Ingestion

If a large amount is swallowed, get medical attention.

Note to Physicians

For inhalation, consider oxygen.

Section 5 - FIRE FIGHTING MEASURES

See Section 9 for Flammability Properties

NFPA Ratings: Health: 1 Fire: 4 Reactivity: 3

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Flammable Properties

Severe explosion hazard. Vapor/air mixtures are explosive. Electrostatic discharges may be generated by flow or agitation resulting in ignition or explosion.

Extinguishing Media

carbon dioxide, regular dry chemical

Large fires: Use regular foam or flood with fine water spray.

Fire Fighting Measures

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.

Section 6 - ACCIDENTAL RELEASE MEASURES

Occupational spill/release

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.

Safety Data Sheet

Material Name: ACETYLENE, DISSOLVED

SDS ID: MAT00280

Section 7 - HANDLING AND STORAGE

Storage Procedures

Store and handle 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 and other sources of ignition. Grounding and bonding required. Secure to prevent tipping. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Analysis

ACETYLENE, DISSOLVED (74-86-2)

NIOSH: 2500 ppm Ceiling; 2662 mg/m3 Ceiling

Component Biological Limit Values

There are no biological limit values for any of this product's components.

Ventilation

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Eye protection not required, but recommended.

Protective Clothing

Protective clothing is not required.

Glove Recommendations

Protective gloves are not required, but recommended.

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 a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Safety Data Sheet

Material Name: ACETYLENE, DISSOLVED

SDS ID: MAT00280

Physical State:	Gas	Appearance:	Not available
Color:	colorless	Physical Form:	gas
Odor:	sweet odor	Odor Threshold:	Not available
pH:	Not available	Melting/Freezing Point:	Not available
Boiling Point:	Not available	Decomposition:	Not available
Evaporation Rate:	Not available	LEL:	2.5 %
UEL:	100 %	Vapor Pressure:	760 mmHg @ -84 °C
Henry's Law Constant:	0.00277024 atm-m ³ /mol	Vapor Density (air = 1):	0.90
Density:	1.1747 g/L @ 0 °C	Water Solubility:	0.94 % @ 25 °C
KOW:	2691.53 estimated from water solubility, estimated from water solubility	Log KOW:	Not available
KOC:	4508.17 estimated from water solubility, estimated from water solubility	Auto Ignition:	305 °C
Viscosity:	0.010 cP @20 °C	Sublimation Point:	-84 °C
Molecular Weight:	26.04	Molecular Formula:	H-C-C-H

Solvent Solubility

Soluble: acetone, benzene, chloroform, ether

* * *Section 10 - STABILITY AND REACTIVITY* * *

Chemical Stability

May decompose violently on heating. May explode when heated.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.

Materials to Avoid

metals, halogens, oxidizing materials, metal carbide, reducing agents, halo carbons

Decomposition Products

oxides of carbon

Possibility of Hazardous Reactions

Polymerizes with evolution of heat. Avoid contact with curing agents, accelerators, and/or initiators.

* * *Section 11 - TOXICOLOGICAL INFORMATION* * *

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Target Organs

ACETYLENE, DISSOLVED (74-86-2)

central nervous system

Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

Safety Data Sheet

Material Name: ACETYLENE, DISSOLVED

SDS ID: MAT00280

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information

Shipping Name: Acetylene, dissolved
UN/NA #: UN1001 **Hazard Class:** 2.1
Required Label(s): 2.1

TDG Information

Shipping Name: Acetylene, dissolved
UN #: UN1001 **Hazard Class:** 2.1
Required Label(s): 2.1

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312

Acute Health: Yes **Chronic Health:** No **Fire:** Yes **Pressure:** Yes **Reactive:** Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
ACETYLENE, DISSOLVED	74-86-2	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
ACETYLENE, DISSOLVED	74-86-2	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

Safety Data Sheet

Material Name: ACETYLENE, DISSOLVED

SDS ID: MAT00280

Section 16 - OTHER INFORMATION

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

Matheson Tri-Gas, Inc. makes no express or implied warranties, guarantees or representations regarding the product or the information herein, including but not limited to any implied warranty or merchantability or fitness for use. Matheson Tri-Gas, Inc. shall not be liable for any personal injury, property or other damages of any nature, whether compensatory, consequential, exemplary, or otherwise, resulting from any publication, use or reliance upon the information herein.

End of Sheet MAT00280