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**MSDS: Ethyl Acetylene**

## PRODUCT INFORMATION

**PRODUCT:** Ethyl Acetylene

**TRADE NAME:** Ethyl Acetylene or 1-Butyne

**CHEMICAL NAME:** Ethyl Acetylene or 1-Butyne

**SYNONYMS:** Butyne

**FORMULA:** C<sub>4</sub>H<sub>6</sub>

**CHEMICAL FAMILY:** Alkyne

**SUPPLIER'S NAME:** MEGS Inc.

**SUPPLIER'S ADDRESS:** 2675 De Miniac  
Ville St-Laurent, Qc, H4S 1E5

**EMERGENCY PHONE NUMBER:** (514) 956-7503

**MOLECULAR WEIGHT:** 54.09

**PRODUCT USE:** Various

**PRODUCT IDENTIFICATION UN 2452  
NUMBER:**

## HAZARDOUS INGREDIENTS

CHEMICAL ID	CONCENTRATION	CAS #	LD(50)	LC(50)
	100%			
Ethyl Acetylene		107-00-6	None	None

## PHYSICAL DATA

**PHYSICAL STATE:** Liquid and gas under pressure

**APPEARANCE:** Colorless gas and liquid with  
acetylenic odor

**ODOR:** See above

**ODOR THRESHOLD:** Unknown

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** Liquid at Boiling Point = 0.650

**VAPOR PRESSURE:** @ 15°C = 132 kPa  
**VAPOR DENSITY (air = 1):** 1.94  
**EVAPORATION RATE:** Unknown  
**BOILING POINT:** 8.08°C  
**FREEZING POINT:** -125.72°C  
**pH:** Unknown  
**GAS DENSITY:** 2.32 kg/m<sup>3</sup> @ 15°C, 101.3 kPa  
**COEFFICIENT OF WATER/OIL @ 15°C, Bunsen Coefficient = 2.0**  
**DISTRIBUTION:**

### **FIRE OR EXPLOSION HAZARD**

**CONDITIONS OF FLAMMABILITY:** Flammable in air

**MEANS OF EXTINCTION:** Water, carbon dioxide, dry chemical.  
"Stop flow of gas before extinguishing fire".

**FLASHPOINT AND METHOD OF DETERMINATION:** Unknown

**UPPER EXPLOSION LIMIT (% BY VOL):** Stoichiometric combustion in air  
**LOWER EXPLOSION LIMIT (% BY VOL):** Stoichiometric combustion in air

**AUTO-IGNITION TEMPERATURE:** Unknown

**FLAMMABILITY CLASSIFICATION:** Class 1, group not specified

**HAZARDOUS COMBUSTION PRODUCTS:** None

**EXPLOSION DATA:** Yes with halogens

**SENSITIVITY TO STATIC DISCHARGE:** Unknown

### **REACTIVITY DATA**

**CHEMICAL STABILITY:** Yes, possible isomerization above 200°C

**INCOMPATIBLE MATERIALS:** Oxidizers, halogens, halogenated compounds

**CONDITIONS OF REACTIVITY:** Heat

**HAZARDOUS DECOMPOSITION PRODUCTS:** None

### **TOXICOLOGICAL PROPERTIES**

**ROUTES OF ENTRY:**

**SKIN CONTACT:** None

**SKIN ABSORPTION:** None

**EYE:** None

**INHALATION:** Moderate concentrations so as to exclude an adequate supply of oxygen to the lungs causes dizziness, drowsiness, and eventual unconsciousness. It has been reported to act as a narcotic.

**INGESTION:** None

**ACUTE OVER EXPOSURE EFFECTS:** Has been reported that breathing high concentrations causes a narcotic or anesthetic effect; however, the major property is the exclusion of an adequate supply of oxygen to the lungs.

**CHRONIC OVER EXPOSURE EFFECTS:** None reported

**EXPOSURE LIMITS:** No TWA is listed (ACGIH 1995-1996). It should be defined as a simple asphyxiant. Oxygen levels should be maintained at greater than 18 molar percent at normal atmospheric pressure which is equivalent to a partial pressure of 135 mm Hg.

**IRRITANCY OF PRODUCT:** None known

**SENSITIZATION TO MATERIAL:** None

**CARCINOGENICITY, REPRODUCTIVE EFFECTS:** None

**TERATOGENICITY, MUTAGENICITY:** None

**TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** Acetylene

## **PREVENTIVE MEASURES**

**PERSONAL PROTECTIVE EQUIPMENT:** Plastic or rubber gloves. Safety goggles or safety glasses. Safety shoes, safety shower.

**SPECIFIC ENGINEERING CONTROLS:** Most metals are compatible with ethyl acetylene. It forms explosive acetylide compounds with copper, mercury, silver and brasses with more than 66% copper.

**LEAK AND SPILL PROCEDURES:** EVACUATE ALL PERSONNEL FROM PERSONNEL AREA.

Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is on container or

container valve, contact the closest MEGS location.

**WASTE DISPOSAL:** Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to MEGS for proper disposal. For emergency disposal, contact the closest MEGS location.

**HANDLING PROCEDURES AND EQUIPMENT:** USE ONLY IN WELL-VENTILATED AREAS.

Valve protection caps must remain in place unless container is secured with valve outlet piped to the point of use. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder. Do not tamper with (valve) safety device. Close valve after each use and when empty.

**STORAGE REQUIREMENTS:** Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 52°C. Cylinders must be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time. Post "No Smoking or Open Flames" signs in the storage or use area. There should be no sources of ignition in the storage or use area.

**TDG CLASSIFICATION:** 2.1

**WHMIS CLASSIFICATION:** A, B

**SPECIAL SHIPPING INFORMATION:** Always secure cylinders in an upright position before transporting them. NEVER transport cylinders in trunks of vehicles, enclosed vans, truck cabs or in passenger compartments. Transport cylinders secured in open flatbed or in open pick-up type vehicles.

## **FIRST AID MEASURES**

**SPECIFIC FIRST AID PROCEDURES:** PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO ETHYL ACETYLENE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND BE COGNIZANT OF EXTREME FIRE AND EXPLOSION HAZARD.

**INHALATION:** Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given assisted resuscitation and supplemental oxygen. Medical assistance should be sought immediately.

**EYE CONTACT:** PERSONS WITH POTENTIAL EXPOSURE TO ETHYL ACETYLENE SHOULD NOT WEAR CONTACT LENSES.

Flush contaminated eye(s) with copious quantities of water. Part eyelids to assure complete flushing. Continue for a minimum of 15 minutes.

**SKIN CONTACT:** Flush affected area with copious quantities of water. Remove affected clothing as rapidly as possible.

<b>PREPARATION INFORMATION</b>
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**PREPARED BY:** Safety Department

**DATE PREPARED:** 01/01/1999

**LAST REVISION DATE:** 05/21/2002

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