

## **ACETYLENE, ETHYNE, ETHINE**

### **MSDS Number**

BHDK

### **National Stock Number**

6830-00-286-5434

### **Product Name**

ACETYLENE, ETHYNE, ETHINE

### **Manufacturer**

AIR PRODUCTS AND CHEMICALS INC

### **Product Identification**

Product ID:ACETYLENE, ETHYNE, ETHINE

MSDS Date:07/10/1986

FSC:6830

NIIN:00-286-5434

MSDS Number: BHDK

### **Responsible Party**

AIR PRODUCTS AND CHEMICALS, INC.

ALLENTOWN , PA 18195

US

Emergency Phone: 1-800-322-9092

Info Phone: 215-481-4911

Cage: 00742

### **Contractor**

OXYGEN SALES AND SERVICE INC

11393

TACOMA, WA 98411-0393

US

800-345-3148/ 800-752-1597

Cage: 5H199

### **Ingredients**

ACETYLENE

CAS: 74-86-2

### **Hazards**

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:ACETYLENE IS A SIMPLE

ASPHYXIAN, IRRITANT, AND ANESTHETIC. ABOUT 100MG PER LITER MAY BE TOLERATED FOR 0.5-1.0 HOUR. THERE IS NO EXPERIMENTAL EVIDENCE OF CHRONIC HARMFUL EFFECTS.

Explanation of Carcinogenicity:ACETYLENE IS CLASSIFIED AS A SIMPLE ASPHYXIAN AND HAS NO THRESHOLD LIMIT VALUE.

Effects of Overexposure:HEADACHES, DIZZINESS, SHORTNESS OF BREATH, & LOSS OF CONSCIOUSNESS MAY OCCUR IF THE GAS IS PRESENT IN QUANTITIES SUFFICIENT TO DILUTE THE OXYGEN CONCENTRATION. SYMPTOMS OF ANOXIA OCCUR ONLY WHEN THE GAS CONCENTRATIONS ARE WITHIN THE FLAMMABLE RANGE AND THE MIXTURE HAS NOT IGNITED.

### **First Aid**

First Aid:FIRST DEGREE & MINOR SECOND DEGREE THERMAL BURNS FROM FIRES SHOULD BE IMMERSSED IN COOL WATER FOR 30MINS. MAJOR SECOND/THIRD DEGREE BURNS SHOULD BE COVERED IN THE CLEANEST MATERIAL AVAILABLE. PERSONS SUFFERING FROM LACK OF OXYGEN SHOULD BE MOVED TO NORMAL ATMOSPHERE. ASSISTED RESPIRATION & SUPPLEMENTAL OXYGEN SHOULD BE GIVEN IF THE VICTIM IS NOT BREATHING. SEEK IMMEDIATE AID OF A PHYSICIAN.

## Fire Fighting

Flash Point Method:CC  
Flash Point:OF/-18C  
Autoignition Temp:Autoignition Temp Text:\*\*\*\*\*  
Lower Limits:100  
Upper Limits:2.5  
Extinguishing Media:CARBON DIOXIDE, DRY CHEMICAL, HALON  
\*SOLUBILITY IN WATER: 64F 18C 1 ATM 1.0 CUFT/CUFT H<sub>2</sub>O  
Fire Fighting Procedures:WITHOUT RISK, MOVE CYLINDERS AWAY FROM FIRE AREA. FROM A SAFE DISTANCE, COOL SURROUNDING CYLINDERS WITH WATER SPRAY UNTIL WELL AFTER FIRE IS OUT.  
Unusual Fire/Explosion Hazard:ACETYLENE IS EXTREMELY FLAMMABLE/EXPLOSIVE. IT MAY DECOMPOSE VIOLENTLY IN ITS FREE STATE UNDER PRESS IN EXCESS OF 15PSIG.IT BURNS W/INTENSELY HOT FLAMES.

## Accidental Release

Spill Release Procedures:VENTILATE AREA TO PREVENT FLAMMABLE MIXTURE FROM FORMING.REMOVE SOURCES OF IGNITION,HEAT,SPARKS,ETC.AVOID ENTERING AREA OF FLAMMABLE ATMOSPHERE. CAREFULLY REMOVE CYLINDERS W/SLW LEAKS TO A REMOTE OUT DOORS LOCATION.CONTACT AIR PRODUCTS FOR ASSISTANCE

## Handling

Handling and Storage Precautions:USE A PRESSURE REDUCING REGULATOR SET AT DAMAGED PRESSURE.SEGREGATE FULL & EMPTY CYLINDERS.  
Other Precautions:ACETYLENE CYLINDERS SHOULD BE STORED AND USED IN AN UPRIGHT POSITION. AVOID HAZARDOUS MIXTURES AND SOURCES OF IGNITION.

## Exposure Controls

Respiratory Protection:OXYGEN DEFICIENT ATMOSPHERES ARE IN THE FLAMMABLE RANGE. DO NOT ENTER. RESPIRATORS WILL NOT FUNCTION.  
Ventilation:NATURAL OR MECHANICAL WHERE GAS IS PRESENT. MECHANICAL VENTILATION FOR ENCLOSED AREAS MUST MEET NEC REQUIREMENTS FOR CLASS 1, GROUP A  
Protective Gloves:LEATHER WORK GLOVES/WELDER GLOVES  
Eye Protection:SAFETY GLASSES/WELDER'S GOGGLES  
Other Protective Equipment:LEATHER SLEEVES, LEATHER APRON & OTHER STANDARD PROTECTIVE EQUIPMENT FOR CUTTING/WELDING.  
Supplemental Safety and Health  
None

## Chemical Properties

Boiling Pt:B.P. Text:-119.2F/-84C  
Vapor Pres:\*SEE BELOW  
Vapor Density:\*SEE BELOW  
Spec Gravity:-116F/-82C  
Solubility in Water:\*SEE BELOW  
Appearance and Odor:PURE ACETYLENE IS COLORLESS & ODORLESS. IMPURITIES IN ACETYLENE GIVE GARLIC LIKE ODO

## Stability

Stability Indicator/Materials to Avoid:NO OXIDIZERS SUCH AS OXYGEN & HALOGENS.FORMS EXPLOSIVE COMPOUNDS W/COPPER,BRASS,COPPER SALTS,HG & HG SALTS,K,AG,&AG SALTS,HNO  
Stability Condition to Avoid:AVOID MECHANICAL SHOCKS TO CONTAINERS OF ACETYLENE.NEVER EXPOSE CYLINDERS OR ACETYLENE SYSTEMS TO SOURCE OF HEAT.  
Hazardous Decomposition Products:ACETYLENE WILL DECOMPOSE INTO ELEMENTAL

CARBON & HYDROGEN UNDER THE ABOVE CONDITIONS

Conditions to Avoid Polymerization:\*VAPOR DENSITY: 68F 20C, 1 ATM

0.0681 \*VAPOR PRESSURE: 62.2F 16.8C 590 PSIA

40ATM

## Disposal

Waste Disposal Methods:DO NOT ATTEMPT TO DISPOSE OF RESIDUAL GASEOUS ACETYLENE IN CYLINDERS. RETURN TO AIR PRODUCTS FOR DISPOSAL.

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