

# MATERIAL SAFETY DATA SHEET

## Ethylene

### 1. Chemical Product And Company Identification

Product Name	<b>Ethylene</b>
Chemical Name	Ethylene
Synonyms	Elayl; Ethene; Etherin; Acetene

<b>Company Identification: (INDIA)</b>	701, Embassy Centre, Nariman Point, Mumbai-400 021
<b>For information in the INDIA, call:</b>	+91-22-2282 4444 (50 Lines)

### 2. Composition, Information on Ingredients

Ingredient	Ethylene Formula: C <sub>2</sub> H <sub>4</sub> Cas: 74-85-1
% Volume	98.0 To 99.95

### 3. Hazards Identification

#### **Emergency Overview**

Simple Asphyxiant - Maintain Oxygen Levels Above 19.5%. Extremely Flammable.

#### **Route Of Entry:**

Skin Contact	Yes
Skin Absorption	No
Eye Contact	Yes
Inhalation	Yes
Ingestion	No

#### **Health Effects:**

Exposure Limits	No
Irritant	No
Sensitization	No
Teratogen	No
Reproductive Hazard	No
Mutagen	No
Synergistic Effects	None Reported
Carcinogenicity	None Reported
Eye Effects	None Anticipated As Product Is A Gas At Room Temperature
Skin Effects	None Anticipated
Ingestion Effects	None Known. Ingestion Is Unlikely

#### **Inhalation Effects:**

Effects of oxygen deficiency resulting from simple asphyxiants may include: rapid breathing, diminished mental alertness, impaired muscular coordination, faulty judgment, depression of all sensations, emotional instability, and fatigue. As asphyxiation progresses, nausea, vomiting, prostration, and loss of consciousness may result, Eventually leading to convulsions, coma, and death. Oxygen deficiency during pregnancy has produced developmental abnormalities in humans and experimental animals.

#### 4. First Aid Measures

**Eyes:** Never introduce ointment or oil into the eyes without medical advice! If pain is present, refer the victim to an Ophthalmologist for treatment and follow up

**Skin:** Adverse effects are not anticipated as product is a gas at room temperature.

**Ingestion:** None required

**Inhalation:** Prompt medical attention is mandatory in all cases of overexposure to ethane. Rescue personnel should be equipped with self-contained breathing Apparatus. Victims should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. If breathing has stopped administer artificial resuscitation and Supplemental oxygen. Further treatment should be symptomatic and supportive. Keep victim warm and quiet.

#### 5. Fire Fighting Measures

Conditions Of Flammability	Flammable gas
Flash Point	Not available
Autoignition Temperature	520 deg cel LEL(%): 3.1 UEL (%): 32
Hazardous Combustion Products	Carbon dioxide, carbon monoxide
Sensitivity To Mechanical Shock	None
Sensitivity To Static Discharge	Not available
Fire And Explosion Hazards	Explodes spontaneously when mixed with chlorine in sunlight
Extinguishing Media	Carbon dioxide, dry chemical or water spray
Fire Fighting Instructions	If possible stop the flow of gas supply. Use water spray to cool adjacent areas.

#### 6. Accidental Release Measures

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or container valve, contact the appropriate emergency telephone number listed in section 1.

#### 7. Handling and Storage

**Electrical Classification :** Earth Ground And Bond All Lines And Equipment Associated With The Ethylene System. Electrical Equipment Should Be Non Sparking Or Explosion-Proof.

Ethylene Is Non-Corrosive And May Be Used With Any Common Structural Material

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<2000 psig) 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.

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 130°F (54°C). Cylinders should 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 from being stored for excessive periods of time. Post "no smoking or open flames" signs in the storage or use area.

## 8. Exposure Control, Personal Protection

### Exposure Limits1:

Ingredient	Ethylene Formula: C2h4 Cas: 74-85-1
% Volume	98.0 To 99.95
Rtecs #	Ku5340000
Refer To Individual State Of Provincial Regulations, As Applicable.	
Engineering Controls	Hood With Forced Ventilation. Local Exhaust To Prevent Dilution Of Oxygen Levels Below 19.5%. Mechanical In Accordance With Electrical Codes.
Eye/Face Protection	Safety Goggles Or Glasses
Skin Protection	Plastic Or Rubber Gloves. Protective Gloves Made Of Any Suitable Material
Respiratory Protection	Positive Pressure Air Line With Full Face Piece And Escape Bottle Or Self-Contained Breathing Apparatus Should Be Available For Emergency Use.
Other/General Protection	Safety Shoes, Safety Shower, Eyewash "Fountain."

## 9. Physical and Chemical Properties

Physical State	Gas
Vapor Pressure	1200 mm Hg at 20 deg cel
Vapor Density (Air = 1)	0.97
Evaporation Point	Not Available
Boiling Point	-103.7 Oc
Freezing Point	-169 Oc
pH	Not Applicable
Specific Gravity	Not Available
Oil/Water Partition Coefficient	Not Available
Solubility (H2O)	Negligible
Odor Threshold	Not Applicable
Odor And Appearance	Colorless Gas With Sweet Odor

## 10. Stability and Reactivity

Stability	Stable
Incompatible Materials	Chlorine, nitrogen dioxide, aluminum chloride, carbon tetrachloride
Hazardous Polymerization	may occur

## 11. Toxicological Information

No Data Available

## 12. Ecological Information

No Data Available

### 13. Disposal Considerations

Do not attempt to dispose of residual 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.

### 14. Transport Information

<b>Proper Shipping Name:</b>	Ethylene, Compressed Ethylene
<b>Hazard Class:</b>	2.1
<b>Identification Number:</b>	UN 1962
<b>Shipping Label:</b>	Flammable Gas

### 15. Regulatory Information

Ethylene is listed under the accident prevention provisions of section 112(r) of the clean air act (caa) with a threshold quantity (tq) of 10,000 pounds.

### 16. Other Information

Compressed gas cylinders shall not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

<b>MSDS Creation Date:</b>	July 22, 2015
<b>Revision #0 Date</b>	

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