



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Ethylene**
Chemical formula : C₂H₄
Synonyms : Elayl; Ethene; Etherin; Ace
Company : Specialty Gases of America, Inc
6055 Brent Dr.
Toledo, OH 43611
Telephone : 419-729-7732
Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
Ethylene	74-85-1	> 98.0 to 99.95%

3. Hazards Identification

Emergency Overview

Simple asphyxiant – maintain oxygen levels above 19.5%.
Extremely flammable.

Potential Health Effects

Inhalation : Effects of oxygen deficiency resulting from 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.

Eye contact : Not anticipated as product is gas at room temperature.

Skin contact : None anticipated.

Ingestion : None known. Ingestion is unlikely.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Never introduce oil or other ointment into the eyes without medical advice. If pain is present, refer the victim to an ophthalmologist for further treatment and follow up.

Skin contact : No adverse effects anticipated.

Ingestion : None required.

Inhalation : Prompt medical attention is mandatory in all cases of overexposure. 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

- Suitable extinguishing media : Carbon dioxide, dry chemical or water spray.
Specific hazards : Explodes spontaneously when mixed with chlorine in sunlight.
Special protective equipment for fire-fighters : If possible stop the flow of gas supply. Use water spray to cool adjacent areas.

6. Accidental Release Measures

- Personal precautions : None.
Environmental precautions : None.
Methods for cleaning up : 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's valve, contact the supplier.
Additional advice : None.

7. Handling and Storage

Handling

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-reducing regulator when connecting cylinder to lower pressure (<2000 psig) piping 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 system. Protect cylinders from physical damage.

Storage

Store in a 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 being stored for excessive periods of time. Post "No smoking or Open flames" signs in the storage or use area.

8. Exposure Controls / Personal Protection

Engineering measures

Hood with local forced ventilation. Local exhaust to prevent dilution of oxygen levels below 19.5%.
Mechanical in accordance with electrical codes.

Personal protective equipment

- Respiratory protection : Positive pressure air line with full-face mask and escape bottle or self-contained breathing apparatus should be available for emergency use.
Hand protection : Plastic or rubber gloves. Protective gloves made of any suitable material.
Eye protection : Safety glasses. A safety shower and eyewash station should be readily available.
Skin and body : Wear suitable protective clothing and safety shoes when handling cylinders.

protection

9. Physical and Chemical Properties

Form	: Gas.
Color	: Colorless.
Odor	: Sweet odor.
Vapor pressure	: Above critical temp.
Vapor density	: 0.97 (Air = 1)
Boiling point	: -103.7 C (-154 F)
Freezing point	: -169 C (-272.6 F)
Water solubility	: Negligible.
Specific gravity	: Not available.
Evaporation rate	: Not available.

10. Stability and Reactivity

Stability	: Stable under normal conditions.
Conditions to avoid	: Storage in poorly ventilated areas. Storage near a heat source.
Materials to avoid	: Chlorine, nitrogen dioxide, aluminum chloride, carbon tetrachloride.
Hazardous decomposition products	: Toxic carbon monoxide.

11. Toxicological Information

Acute Health Hazard

Ingestion	: Not available.
Inhalation	: Not available.
Skin	: Not available.

12. Ecological Information

No adverse ecological effects are expected.

13. Disposal Considerations

Waste from residues / unused products	: 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 to an authorized distributor for proper disposal.
Contaminated packaging	: Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	: Ethylene, Compressed
Class	: 2.1
UN/ID No.	: UN1962
Labeling	: Flammable Gas

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class(es)

Material is not listed in appendix A of 29 CFR 1910.119 as highly hazardous chemical.

TCSA

Material is listed in TSCA inventory.

SARA

The threshold planning quantity for material is 10,000 lbs.

SARA Title III – Hazard Classes

Acute Health Hazard

Fire Hazard

Sudden Release of Pressure Hazard

16. Other Information

Prepared by : Specialty Gases of America, Inc.

For additional information, please visit our website at www.americangasgroup.com.