Material Safety Data Sheet

1. Product and Company Identification

Product name : **1-Butyne**

Chemical formula : C4H6

Synonyms : Ethyl Acetylene; Butyne; Ethylacetylene; Ethylethyne; Ethyl Acetylene, Inhibited; UN 2452

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
1-Butyne	107-00-6	99+%
Stabilizers	Not available	< 0.1%

3. Hazards Identification

Emergency Overview

Flammable gas. May explode when heated. May cause flash fire.
May cause difficulty breathing.

Potential Health Effects

Inhalation : Nausea, vomiting, symptoms of drunkenness, suffocation, convulsions, coma.
Eye contact : No information on significant adverse effects.
Skin contact : No information on significant adverse effects.
Ingestion : No information on significant adverse effects.
Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.
Eye contact : Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.
Skin contact : Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.
Ingestion : If a large amount is swallowed, get medical attention.
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.

Note to physicians	:	For inhalation, consider oxygen.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Carbon dioxide, regular dry chemical. Large fires: Use regular foam or flood with fine water spray.
Specific hazards	:	Severe fire hazard. Severe explosion hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Electrostatic charges may be generated by flow or agitation resulting in ignition or explosion.
Fire fighting	:	Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. 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 fire 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 or 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.

6. Accidental Release Measures

Occupational spill/release	:	Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. 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.
Additional advice	:	None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Grounding and bonding required. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH, OSHA and NIOSH have not developed exposure limits for any of this product's components.

Engineering measures/Ventilation

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

Personal protective equipment

Respiratory	:	Under conditions of frequent use or heavy exposure, respiratory protection may

protection		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.
Hand protection	:	Wear insulated gloves.
Eye protection	:	Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Skin and body protection	:	Wear appropriate chemical resistant clothing.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Garlic odor.
Vapor pressure	:	1201 mmHg @ 21.1°C
Vapor density	:	1.93 @ 25°C
Boiling point	:	8°C
Melting point	:	-126°C
Water solubility	:	Insoluble.
Specific gravity	:	0.6784 @ 0°C
Solvent solubility	:	Soluble: alcohol, ether

10. Stability and Reactivity

Stability	:	May explode when heated.
Conditions to avoid	:	Avoid heat, flames, sparks or other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Acids, metals, halogens, oxidizing materials.
Hazardous decomposition products	:	Thermal decomposition products: oxides of carbon.

11. Toxicological Information

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.

Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

12. Ecological Information

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

13. Disposal Considerations

Waste from residues / unused products	:	Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. D003. Dispose in accordance with all applicable regulations.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Ethylacetylene, inhibited
Class	:	2.1
UN/ID No.	:	UN2452
Labeling	:	Flammable gas

15. Regulatory Information

U.S. Federal Regulations

None of this product's components are listed under SARA Section 302/304 (40 CFR 355 Appendix A), SARA 311/312 (40 CFR 370.21), 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: Yes
Chronic: No
Fire: Yes
Reactive: Yes
Pressure: 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	RI
1-BUTYNE	107-00-6	No	No	No	Yes	No	No

Not regulated under California Proposition 65.

16. Other Information

Prepared by : Specialty Gases of America, Inc.

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