



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Allene**

Chemical formula : C₃-H₄

Synonyms : Sym-Allylene; Dimethylenemethane; Propadiene; 1,2-Propadiene; Propadiene, Inhibited; UN 2200

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 |
|------------|------------|----------|
| Allene | 463-49-0 | 100% |

3. Hazards Identification

Emergency Overview

May cause respiratory tract irritation, skin irritation, eye irritation, difficulty breathing.
Flammable gas. May cause flash fire.

Potential Health Effects

Inhalation : Irritation, nausea, vomiting, headache, symptoms of drunkenness, suffocation, convulsion, coma.

Eye contact : Irritation (possibly severe), blurred vision.

Skin contact : Irritation (possibly severe).

Ingestion : No information on significant adverse effects.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Wash eyes immediately with large amount of water, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

Skin contact : If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105 – 115°F; 41 – 46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

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.

5. Fire-Fighting Measures

- Suitable extinguishing media : Carbon dioxide, regular dry chemical.
Large fires: Flood with fine water spray.
- Specific hazards : Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive above flash point.
- Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after fire is out. Stay away from 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 of 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 regulations: U.S. OSHA 29 CFR 1910.106. Keep separated from incompatible materials. Grounding and bonding required.

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 or process enclosure 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

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| protection | be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any supplied-air respirator with a full facepiece that is operated in a 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. 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 with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. |
| Skin and body protection | : For the gas: Wear appropriate chemical resistant clothing. For the liquid: Wear appropriate, protective, cold insulating clothing. |

9. Physical and Chemical Properties

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| Form | : Gas. |
| Color | : Colorless. |
| Odor | : Sweet odor. |
| Molecular weight | : 40.06 |
| Vapor pressure | : 6551 mmHg @ 21.1°C |
| Vapor density | : 1.4 (air = 1) |
| Specific gravity | : 1.787 (water = 1) |
| Boiling point | : -30.1 to -26°F (-34.5 to -32°C) |
| Melting point | : -231 to -213°F (-146 to -136°C) |
| Water solubility | : Insoluble. |
| Evaporation rate | : Not applicable. |
| Solvent solubility | : Soluble: benzene, petroleum ether |

10. Stability and Reactivity

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| Stability | : Uninhibited material may decompose violently at increased temperature and/or pressure. |
| Conditions to avoid | : Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat. |
| Materials to avoid | : Metals, 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.

Local Effects

ALLENE (463-49-0) : Irritant: inhalation, skin, eye

12. Ecological Information

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

13. Disposal Considerations

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

14. Transport Information

DOT (US only)

Proper shipping name : Propadiene, stabilized
Class : 2.1
UN/ID No. : UN2200
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 |
|-----------|----------|----|----|----|-----|----|----|
| ALLENE | 463-49-0 | 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.