



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Acrolein**

Chemical formula : C₃H₄O

Synonyms : 2-Propenal, Acraldehyde, Acrylic aldehyde, Allylaldehyde

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
Acrolein	107-02-8	99+%

3. Hazards Identification

Emergency Overview

Poisonous, flammable liquid and vapor.
May be fatal if inhaled.
Can cause eye and skin burns.
May cause irritation to respiratory tract.

Potential Health Effects

Routes of entry : Inhalation, skin, ingestion.

Acute effects : If inhaled, severe irritation of the nose, throat and upper respiratory tract will result. Can be absorbed through the skin. Skin and eye contact may result in burns. Possible dermatitis from skin contact. Ingestion causes irritation and burning sensations of the upper gastrointestinal tract. Inhalation may be fatal due to spasm, inflammation, edema, or the larynx and bronchi, chemical pneumonitis and pulmonary edema. Severe lachrymator. Symptoms include burning sensation, coughing, wheezing, shortness of breath, and headaches. Symptoms may include nausea, vomiting and laryngitis.

Chronic effects : Suspected human carcinogen. Eyes, lung and liver damage. Cardiovascular problems. Possible cancer hazard.

Medical conditions aggravated by overexposure : Cardiovascular problems.

Other effects of overexposure : None known.

4. First Aid Measures

General advice : None.

Eye contact : Immediately flush eyes, including under the eyelids, gently but thoroughly with

- plenty of running water for at least 15 minutes. Seek medical attention as soon as possible.
- Skin contact : Immediately flush with large amount of water. Use soap if possible. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention.
- Ingestion : Have conscious and alert person drink 1 to 2 glasses of water. Contact physician immediately. Induce vomiting.
- Inhalation : Immediately remove victim to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration.

5. Fire-Fighting Measures

- Suitable extinguishing media : Carbon dioxide, foam, or dry chemical. Water may be effective for cooling cylinders, but may not effect extinguishment.
- Specific hazards : Cylinder rupture may occur under fire conditions. Do not expose to heat or flame. Can react violently with oxidizing materials. Vapors may travel a considerable distance to the source of ignition and flash back.
- Special protective equipment for fire-fighters : Wear self contained breathing apparatus and full protective clothing. Move cylinders away from fire if this can be done safely. Keep fire exposed cylinders cool with water spray.

6. Accidental Release Measures

- Personal precautions : None.
- Environmental precautions : None.
- Methods for cleaning up : Evacuate and ventilate area. Remove all sources of ignition. Cover with an activated carbon absorbent, take up, and place in closed containers for disposal. Use non-sparkling tools.
- Additional advice : None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders. Use spark-proof tool and explosion-proof equipment. Use only in chemical fume hood. Avoid exposure to direct sunlight.

Storage

Store in well ventilated areas. Be sure storage area is cool and dry. Keep valve protection cap on cylinders when not in use. Store away from heat, flame and sparks. Keep away from oxidizing agents. Refrigerate at 2-8 deg. C.

8. Exposure Controls / Personal Protection

Engineering measures

Provide adequate general and local exhaust ventilation to maintain concentrations below flammable limits.

Personal protective equipment

- Respiratory protection : Use a self-contained breathing apparatus in case of emergency or non-routine use.
- Hand protection : Impervious gloves.
- Eye protection : Safety glasses. A safety shower and eyewash station should be readily available.
- Skin and body protection : Coveralls, boots, and/or other resistant protective clothing.
- Special instructions for protection and : To prevent static sparks, electrically ground and bond all equipment used with and around material.

hygiene
Remarks : None.

9. Physical and Chemical Properties

Form : Liquid.
Color : Colorless to pale yellow.
Odor : Pungent odor.
Vapor pressure : @ 20 deg. C: 210 mm Hg
Vapor density : 1.94 (Air = 1)
Boiling point (C) : 53
Water solubility : Soluble.
Specific gravity : @ 20 deg. C: 0.84 (H₂O = 1).
Evaporation rate : Not available.

10. Stability and Reactivity

Stability : Unstable.
Conditions to avoid : Sparks, flame, heat and other sources of ignition. Contact with air.
Materials to avoid : Oxidizing agents, acids and bases. Reducing agents. Oxygen. Amines, ammonia and alcohol. Alkali and alkaline earth metals.
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 : Return cylinders to supplier with any valve outlet plugs or caps secured and valve protection cap in place. Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Non-returnable cylinders must not be refilled. Follow federal, state and local regulations.
Contaminated packaging : Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name : Acrolein
Class : 6.1, Packing Group I
UN/ID No. : UN1092
Labeling : Poison, Flammable liquid

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.

TSCA

Material is listed in TSCA inventory.

SARA

The threshold planning quantity for material is 1000 lbs.

Number in Annex 1 of DIR 67/548

Not listed in annex 1.

16. Other Information

Prepared by : Specialty Gases of America, Inc.

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