



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Heptane**

Chemical formula : C₇H₁₆

Synonyms : Normal Heptane; Dipropyl Methane; Heptyl Hydride; Dipropylmethane; N-Heptane; UN 1206

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
Heptane	142-82-5	100%

3. Hazards Identification

Emergency Overview

Flammable liquid and vapor. Vapor may cause flash fire.

May cause respiratory tract irritation, skin irritation, eye irritation, aspiration hazard, central nervous system depression.

Potential Health Effects

Inhalation : Irritation, loss of appetite, headache, drowsiness, dizziness, emotional disturbances, loss of coordination, suffocation, unconsciousness.

Eye contact : Irritation.

Skin contact : Irritation.

Ingestion : Irritation, loss of appetite, headache, drowsiness, dizziness, emotional disturbances, loss of coordination, suffocation, unconsciousness, nausea, vomiting, diarrhea, stomach pain, aspiration hazard.

Chronic Health Hazard : None known.

4. First Aid Measures

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 : Aspiration hazard. DO NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention immediately. Give artificial respiration if not breathing.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

5. Fire-Fighting Measures

Suitable extinguishing media : Regular dry chemical, carbon dioxide, water, regular foam.
Large fires: Use regular foam or 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. 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, evacuation radius: 800 meters (1/2 mile). Water may be ineffective.

6. Accidental Release Measures

Occupational spill/release : Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry.

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. Grounding and bonding required. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH : 400 ppm TWA
500 ppm STEL

OSHA (final) : 500 ppm TWA; 2000 mg/m³ TWA

OSHA (vacated) : 500 ppm STEL; 2000 mg/m³ STEL
400 ppm TWA; 1600 mg/m³ TWA

NIOSH : 85 ppm TWA; 350 mg/m³ TWA
440 ppm Ceiling 15 min; 1800 mg/m³ Ceiling 15 min

IDLH

3800 ppm

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 protection : The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
750 ppm – Any air-purifying half-mask respirator equipped with organic vapor cartridge(s).
Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.
Any powered, air-purifying respirator with organic vapor cartridge(s).
Any supplied-air respirator.
Any self-contained breathing apparatus with a full facepiece.
Emergency or planned entry into unknown concentrations or IDLH conditions –
Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
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.
Escape – Any air-purifying full-facepiece respirator (gas mask) with a chin-style, front-mounted or back-mounted organic vapor canister.
Any appropriate escape-type, self-contained breathing apparatus.
- Hand protection : Wear appropriate chemical resistant 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 : Volatile liquid.
Color : Colorless.
Odor : Faint odor, gasoline odor.
Molecular weight : 100.21
Vapor pressure : 40 mmHg @ 20°C
Vapor density : 3.45 (air = 1)
Specific gravity : 0.6837 (water = 1)
Boiling point : 98°C
Melting point : -91°C
Water solubility : 0.005%
Evaporation rate : 2.80 (butyl acetate = 1)
Solvent solubility : Soluble: ethanol, ether, chloroform, acetone

10. Stability and Reactivity

- Stability : Stable under normal conditions.
- Conditions to avoid : Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.
- Materials to avoid : Oxidizing materials, combustible materials.
- Hazardous decomposition : Thermal decomposition products: oxides of carbon.

products

11. Toxicological Information

The components of this material have been reviewed in various sources and the following endpoints are published:

HEPTANE (142-82-5) : Oral LC50 Rat: 103 g/m³/4H; Oral LD50 Mouse: 5000 mg/kg; Dermal LD50 Rabbit: 3000 mg/kg

Acute Toxicity Level

HEPTANE (142-82-5) : Slightly toxic: inhalation

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Local Effects

HEPTANE (142-82-5) : Irritant: inhalation, skin, eye

Target Organs

HEPTANE (142-82-5) : Central nervous system

Medical Conditions Aggravated by Exposure

Respiratory disorders, skin disorders and allergies.

Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

12. Ecological Information

Aquatic Toxicity

HEPTANE (142-82-5) : Fish: 96 Hr LC50 Cichlid fish: 375.0 mg/L
Invertebrate: 48 Hr EC50 Daphnia magna: > 10 mg/L

13. Disposal Considerations

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

14. Transport Information

DOT (US only)

Proper shipping name : Heptanes
Class : 3, Packing Group II
UN/ID No. : UN1206
Labeling : Flammable Liquid

15. Regulatory Information

U.S. Federal Regulations

This material contains one or more of the following chemicals required under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

HEPTANE (142-82-5) : TSCA 12b: Section 4, 1%

SARA 311/312

Acute: Yes
Chronic: No
Fire: Yes
Reactive: No
Pressure: No

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
HEPTANE	142-82-5	Yes	Yes	Yes	Yes	Yes	Yes

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.