



Material Safety Data Sheet

1. Product and Company Identification

Product name : **N-Hexane**

Chemical formula : C₆H₁₄

Synonyms : Hexane; Hexyl hydride; Normal Hexane; Skellysolve B; Caproyl Hydride; UN1208

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
N-Hexane	110-54-3	99+%

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Hexane isomers.

3. Hazards Identification

Emergency Overview

Extremely flammable liquid and vapor. Vapor may cause flash fire. Electrostatic charges may be generated by flow, agitation, etc.

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

Potential Health Effects

Inhalation : Irritation, nausea, irregular heartbeat, headache, drowsiness, dizziness, mood swings, loss of coordination, lung congestion, nerve damage, brain damage, unconsciousness. May cause irritation, nausea, irregular heartbeat, headache, drowsiness, dizziness, mood swings, muscle cramps, loss of coordination, visual disturbances, impotence, lung congestion, nerve damage, brain damage, paralysis, unconsciousness in long term exposure.

Eye contact : Irritation.

Skin contact : Irritation.

Ingestion : Irritation, nausea, vomiting, stomach pain, headache, drowsiness, dizziness, loss of coordination, heart disorders, brain damage, aspiration hazard.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

- Eye contact : Immediately 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 immediate medical attention. Give artificial respiration if not breathing.
- 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, 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 from unmanned hose holder or monitor nozzle until well after the 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. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).
- 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. Store in a tightly closed container. Keep separated from incompatible substances. Store in a cool, dry place. Store in a well-ventilated area. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH	:	50 ppm TWA 1000 ppm STEL (other than n-Hexane) Skin – potential significant contribution to overall exposure by the cutaneous route.
OSHA (final)	:	500 ppm TWA; 1800 mg/m ³ TWA
OSHA (vacated)	:	1000 ppm STEL; 3600 mg/m ³ STEL 50 ppm TWA; 180 mg/m ³ TWA
NIOSH	:	50 ppm TWA; 180 mg/m ³ TWA 510 ppm Ceiling other than n-Hexane 15 min; 1800 mg/m ³ Ceiling other than n-Hexane 15 min

IDLH

1100 ppm

Engineering measures/Ventilation

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. 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. 500 ppm – Any supplied-air respirator. 1100 ppm – Any supplied-air respirator operated in a continuous-flow mode. Any self-contained breathing apparatus with a full facepiece. Any supplied-air respirator 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 with a faceshield. 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	:	Liquid.
Color	:	Colorless.
Odor	:	Faint odor, gasoline odor.
Molecular weight	:	86.18
Vapor pressure	:	124 mmHg @ 20°C
Vapor density	:	3.0 (air = 1)
Boiling point	:	69°C
Melting point	:	-95°C
Water solubility	:	0.014% @ 20°C
Specific gravity	:	0.6603 (water = 1)
Evaporation rate	:	15.8 (butyl acetate = 1)

Solvent solubility : Soluble: alcohol, ether, chloroform, acetone, organic solvents

10. Stability and Reactivity

Stability : Stable under normal conditions.
Conditions to avoid : Avoid heat, flames, sparks or 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, halogens, combustible 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 the following endpoints are published:

N-HEXANE (110-54-3) : Inhalation LC50 Rat: 48000 ppm/4H; Oral LD50 Rat: 25 g/kg; Dermal LD50 Rabbit: 3000mg/kg

Acute Toxicity Level

N-HEXANE (110-54-3) : Slightly toxic: Inhalation
Non toxic: Ingestion

Component Carcinogenicity

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

Local Effects

N-HEXANE (110-54-3) : Irritant: Inhalation, skin, eye

Target Organs

N-HEXANE (110-54-3) : Nervous system

Medical Conditions Aggravated by Exposure

Kidney disorders, liver disorders, respiratory disorders, skin disorders and allergies.

Additional Data

Alcohol may enhance the toxic effects.

12. Ecological Information

Aquatic Toxicity

N-HEXANE (110-54-3) : Fish: 96 Hr LC50 Pimephales promelas: 2.1 – 2.98 mg/L [flow-through]
Invertebrate: 24 Hr EC50 Daphnia magna: >1000 mg/L

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 : Hexanes
Class : 3, Packing Group II
UN/ID No. : UN1208
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.

N-HEXANE (110-54-3) : 5000 lb final RQ; 2270 kg final RQ
SARA 313: 1.0% de minimis concentration
CERCLA: 5000 lb final RQ; 2270 kg final RQ

SARA 311/312

Acute: Yes
Chronic: Yes
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
N-HEXANE	110-54-3	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.