



Safety Data Sheet

Heptane

This SDS is valid for all grades

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Heptane

Synonyms/Generic Names: Dipropyl methane; Heptyl hydride

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Alliance Chemical
204 S. Edmond St.
Taylor, TX 76574
www.alliancechemical.com

For More Information Call: 512-365-6838 (Monday-Friday 8:00-4:00) CT

In Case of Emergency Call: CHEMTREC - CHEMTEL day or night (800) 255-3924.

2. HAZARDS IDENTIFICATION

Signal Word: Danger

Pictograms:



GHS Classification:

Flammable liquids	Category 2
Skin irritation	Category 2
Specific target organ toxicity-single exposure, Respiratory tract irritation	Category 3
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

GHS Label Elements, including precautionary statements:

Hazard Statements:

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/Bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P271	Use only in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
P303+P362+P352	IF ON SKIN (or hair): Take off contaminated clothing and wash before use. Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P370+P378	In case of fire: Use appropriate media to extinguish.
P391	Collect spillage.
P403+P233+P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

NFPA Ratings

Health	2
Flammability	3
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Heptane (n-)	>99	142-82-5	205-563-8	C ₇ H ₁₆	100.20 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.

Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.
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5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is highly flammable. Use water fog, "alcohol" foam, dry chemical, CO2 or appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides and unidentified organic compounds) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Neutralize spill as needed. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area. Avoid all sources of ignition. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Heptane (n-)	400 ppm 1640 mg/m ³	TLV	ACGIH (TWA)
	500 ppm 2050 mg/m ³	STEL	ACGIH (STEL/CEIL(C))
	500 ppm 2000 mg/m ³	PEL	OSHA (TWA)
	85 ppm 350 mg/m ³	REL	NIOSH (TWA)
	440 ppm 1800 mg/m ³	STEL	NIOSH (STEL/CEIL(C))

TWA: Time Weighted Average over 8 hours of work.
 TLV: Threshold Limit Value over 8 hours of work.
 REL: Recommended Exposure Limit
 PEL: Permissible Exposure Limit
 STEL: Short Term Exposure Limit usually 15 minutes.
 IDLH: Immediately Dangerous to Life or Health
 WEEL: Workplace Environmental Exposure Levels
 CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Use non-spark equipment.

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, water like liquid.
Odor	Gasoline-like odor, pungent
Odor threshold	150 ppm
pH	Not Available
Melting point/freezing point	-90.7°C (-131.3°F)
Initial boiling point and boiling range	98.4 (209.1°F)
Flash point	CLOSED CUP: -4°C (24.8°F).
Evaporation rate	Not Available
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	LOWER: 1.05% UPPER: 6.7%
Vapor pressure	53.3 hPa (40 mmHg) at 20°C (68°F)
Vapor density	3.5 (Air = 1)
Density	0.6838 (Water = 1)
Solubility (ies)	Soluble in diethyl ether, acetone. Insoluble in cold water. Soluble in alcohol. Solubility in chloroform, petroleum ether, ether, acetone: >10%.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	223°C (433.4°F)
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.
Conditions to Avoid	Heat, flames, sparks, extreme temperature, and direct sunlight.
Incompatible Materials	Strong oxidizing agents. Excessive heat
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

n-Heptane

Skin	Not Available
Eyes	Not Available
Respiratory	LC50 Inhalation - rat - 4 h – 48,000 ppm
Ingestion	Not Available

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness, itchiness.
Eyes	Irritation, redness, watering eyes, itchiness.
Respiratory	Irritation, coughing, wheezing, headache, nausea, dizziness, hilarity, hallucinations, light-headedness, distorted perceptions, convulsions, weakness. Aspiration into the lungs can produce chemical pneumonitis.
Ingestion	Gastrointestinal tract irritation with nausea, vomiting, swelling of the abdomen

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Central nervous system, Skin, Lungs
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

n-Heptane

Aquatic Vertebrate	LC50 - <i>Carassius auratus</i> (goldfish) - 4 mg/l - 24 h
Aquatic Invertebrate	EC50 - <i>Daphnia magna</i> (Water flea) - > 10 mg/l - 24 h (formulated product)
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Very toxic to aquatic life with long lasting effects. Do not empty into drains. Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1206, Heptanes, 3, pg II
TDG	UN1206, HEPTANES, 3, pg II
IMDG	UN1206, HEPTANES, 3, pg II
Marine Pollutant	Yes
IATA/ICAO	UN1206, Heptanes, 3, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
Massachusetts: Toxic or Hazardous Substance List	Listed: Heptane (N Heptane)
New Jersey: Right to Know Hazardous Substance List	Listed: n-Heptane
Pennsylvania: Hazardous Substance List	Listed: Heptane
Rhode Island: Hazardous Substance List	Listed: Heptane
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 312	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
SARA 313	Not Listed
WHMIS Canada	Class B2: Flammable and combustible liquid- Flammable liquid Class D2B: Poisonous and infectious material- Other effects- Toxic

16. OTHER INFORMATION

Revision	Date
Created on	09/25/2023

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