

Effective Date: 05/01/13
Replaces Revision: 09/08/09

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: HEPTANE

Synonyms: n-Heptane, Normal Heptanes, Dipropyl Methane, Heptyl Hydride

Recommended Use of the Chemical and Restrictions On Use: Laboratory Reagent

Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Flammable liquids (Category 2)

Skin irritation (Category 2)

Specific target organ toxicity - single exposure (Category 3)

Aspiration hazard (Category 1)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 4)

Risk Phrases:

R11: Highly flammable.

R38: Irritating to skin.

R50: Very toxic to aquatic organisms.

R53: May cause long-term adverse effects in the aquatic environment.

R65: Harmful: may cause lung damage if swallowed.

R67: Vapors may cause drowsiness and dizziness.

Label Elements:

Trade Name: HEPTANE

Signal Word: Danger



Hazard Statements:

H225: Highly flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H336: May cause drowsiness or dizziness.
H400: Very toxic to aquatic life.
H413: May cause long lasting harmful effects to aquatic life.

Precautionary Statements:

P210: Keep away from heat / sparks / open flames / hot surfaces – No smoking.
P261: Avoid breathing dust / fume / gas / mist / vapors / spray.
P273: Avoid release to the environment.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P331: Do NOT induce vomiting.

3. Composition / Information on Ingredients

CAS Number: 142-82-5
EC Number: 205-563-8
Index Number: 601-008-00-2
Molecular Weight: 100.20 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Ethyl Acetate	142-82-5	205-563-8	90 - 100%	Yes	Substance

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Get medical attention.

Ingestion: Aspiration hazard. DO NOT induce vomiting. Give large amounts of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire-fighting Measures

Fire: Flammable Liquid and Vapor! Contact with strong oxidizers may cause fire. Flash point: -4C (25F) CC; Autoignition temperature: 204C (399F); Flammable limits in air % by volume: lel: 1.05; uel: 6.7

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Fire Extinguishing Media: Dry chemical, foam or Carbon Dioxide. Water may be ineffective. Water spray may be used to keep fire exposed containers cool.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Contain and recover liquid when possible. Do not let product enter drains. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Use non-sparking tools and equipment. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product. DO NOT attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits:

N-Heptane:

OSHA Permissible Exposure Limit (PEL): 500 ppm (TWA)

ACGIH Threshold Limit Value (TLV): 400 ppm (TWA), 500 ppm (STEL)

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless liquid

Odor: Mild, gasoline-like

Odor Threshold: Not determined

pH: No data available

% Volatiles by volume @ 21C (70F): 100

Melting Point: - 91C (-132F)

Boiling Point / Boiling Range: 98C (208F)

Flash Point: -4C (25F) CC

Evaporation Rate (BuAC=1): Not determined

Flammability: Flammable liquid and vapor

Upper / Lower Flammability or Explosive Limits: uel: 6.7; lel: 1.05

Vapor Pressure (mm Hg): 40 @ 20C (68F)

Vapor Density (Air=1): 3.5

Relative Density: 0.684 g/mL at 25C (77F)

Solubility: Insoluble in water
Partition Coefficient: n-octanol / water: log Pow: > 3
Auto-ignition Temperature: 204C (399F)
Decomposition Temperature: No data available
Viscosity: No data available

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage. Heat will contribute to instability.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flame, ignition sources, incompatibles.

Incompatible Materials: Heat, flame, other sources of ignition, strong oxidizers.

Hazardous Decomposition Products: Carbon Dioxide and Carbon Monoxide may form when heated to decomposition.

11. Toxicological Information

Emergency Overview: DANGER! FLAMMABLE LIQUID AND VAPOR. HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Potential Health Effects:

Inhalation: Inhalation of vapors irritates the respiratory tract. May produce light headedness, dizziness, muscle lack of coordination, loss of appetite and nausea. Higher concentrations can produce central nervous system depression, narcosis, and unconsciousness.

Ingestion: May produce abdominal pain, nausea. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms expected to parallel inhalation.

Skin Contact: May cause mild irritation, redness, pain.

Eye Contact: Vapors may irritate the eyes. Splashes may produce redness, pain.

Chronic Exposure: Repeated or prolonged skin contact may defat the skin and produce irritation and dermatitis.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or impaired pulmonary function may be more susceptible to the effects of this substance.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) May cause drowsiness or dizziness.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Heptane (142-82-5)	No	No	None

Acute Toxicity:

For n-Heptane: Inhalation rat LC50: 103 gm/m3 / 4hr

12. Ecological Information

For n-Heptane:

Ecotoxicity:

Toxicity to fish LC50 - Carassius auratus (goldfish): 4 mg/l / 24 hr

LC50 - Tilapia mossambica: 375 mg/l / 96 hr

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 1.50 mg/l / 48 hr

Persistence and Degradability: When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.

Bioaccumulative Potential: This material may bioaccumulate to some extent.

Mobility in Soil: When released into the soil, this material is not expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate.

Other adverse effects: This material has an estimated bioconcentration factor (BCF) of greater than 100. This material has a log octanol-water partition coefficient of greater than 3.0.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

UN Number: UN1206

UN Proper Shipping Name: HEPTANES

Packing Group: II



Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Transport Hazard Class(es): 3

Maritime Transport IMDG/GGVSea

Transport Hazard Class(es): 3

Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR

Transport Hazard Class(es): 3

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Special Precautions for User: No additional information

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Heptane (142-82-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Heptane (142-82-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

	SARA 302		SARA 313	
Ingredient	RQ	TPQ	List Chemical	Catg.
Heptane (142-82-5)	No	No	No	No

Federal, State & International Regulations - Part 2

	RCRA		TSCA
Ingredient	CERCLA	261.33	8(d)
Heptane (142-82-5)	No	No	Yes

Chemical Weapons Convention: No		TSCA 12(b): No		CDTA: Yes
SARA 311/312:	Acute: Yes	Chronic: No	Fire: Yes	Pressure: No
Reactivity: No		Pure / Liquid		

Australian Hazchem Code: 3[Y]E

Poison Schedule: None allocated

16. Other Information

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