

SAFETY DATA SHEET

Heptanes

Valid for all catalog numbers starting with 391 including
391000REA

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals
Synonyms: Heptanes solution
Other means of identification: CAS No. 142-82-5
EINECS No. 205-563-8

Recommended use of the chemical and restrictions on use:

Supplier Details:

Pharmco Products, Inc.
1101 Isaac Shelby Drive, Shelbyville,
KY 40065, USA.
Tel: 502.232.7600
Fax: 502.633.6100
CCN17213

Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

Emergency Contact:

CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)



2. HAZARDS IDENTIFICATION

OSHA Hazards:

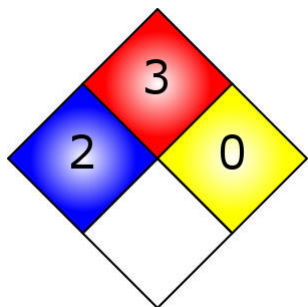
Flammable liquid, Irritant

Target Organs:

Central nervous system, Heart, Lungs

Product Information: 203.740.3471 Emergency Assistance (CHEMTREC): 1.800.424.9300 (USA)
+1.703.527.3887 (INT)

NFPA



GHS label elements, including precautionary statements



Signal Word:

DANGER!

Hazard statement(s)

| | |
|------|---|
| 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. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Precautionary statement(s)

| | |
|-------------|--|
| P273 | Avoid release to the environment. |
| P501 | Dispose of contents and container to an approved waste disposal plant. |
| P331 | Do NOT induce vomiting. |
| P301 + P310 | IF SWALLOWED: Immediately call a POISON CENTER or a doctor/physician. |
| P102 | Keep out of reach of children. |
| P280 | Wear protective gloves and eye and face protection. |

GHS Classification(s)

Aspiration hazard (Category 1)
Chronic aquatic toxicity (Category 1)
Flammable Liquids (Category 2)
Skin irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)

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Other hazards which do not result in classification:

Potential Health Effects:

| Organ | Description |
|------------|--|
| Eyes | Causes eye irritation. |
| Ingestion | May be harmful if swallowed. |
| Inhalation | May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. |
| Skin | Harmful if absorbed through skin. Causes skin irritation. |

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| | |
|-------------------------------|------------------------------------|
| Chemical identity: | Heptanes |
| Common name / Synonym: | Heptanes solution (isomer mixture) |
| CAS number: | 142-82-5 |
| EINECS number: | 205-563-8 |

| % Weight | Material | CAS |
|----------|-----------|----------|
| 25 | n-Heptane | 142-82-5 |

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Wash skin with soap and copious amounts of water. Seek medical attention.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

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5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam. Cool all affected containers with flooding quantities of water.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides expected to be the primary hazardous combustion product.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Flammable Properties

Flash point

-4 °C (25 °F) - closed cup

Autoignition temperature

223 °C (433 °F)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations.

Vapors can accumulate in low areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container. Keep container closed.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

| Component | Source | Type | Value | Note |
|-----------|-----------|------|----------------------|--|
| n-Heptane | US (OSHA) | TWA | 500 ppm, 2,000 mg/kg | 29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants |

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:

Wear impervious, flame retardant, antistatic protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---------------------------------------|
| Appearance (<i>physical state, color, etc.</i>) | Liquid. |
| Freezing point | -91 °C (-132 °F) |
| Initial boiling point and boiling range | 98 °C (209 °F) |
| Flash point | -4 °C (25 °F) - closed cup |
| Upper / Lower flammability or explosive limits | 1.05% (V) / 6.7% (V) |
| Vapor pressure | 53.3 hPa (40.0 mmHg) at 20 °C (68 °F) |

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| | |
|----------------------------------|--|
| Vapor Density | 3.4 |
| Relative Density | 0.693 g/cm ³ at 25 °C (77 °F) |
| Solubility(ies) | not soluble |
| Auto-ignition temperature | 233 °C (433 °F) |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| Chemical Stability | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | Vapors may form explosive mixture with air. |
| Conditions to avoid (e.g., static discharge, shock or vibration) | Heat, flames, and sparks. Extreme temperatures and direct sunlight. |
| Incompatible materials | Strong oxidizing agents, acids, chlorine, phosphorus |
| Hazardous decomposition products | Hazardous decomposition products formed under fire conditions. - Carbon oxides |

11. TOXICOLOGICAL INFORMATION

- Heptanes 64742-49-0

Product Summary:

No data available for the mutagenic, teratogenic, or reproductive effects of the product.

Acute Toxicity:

| | | | |
|-------------------|-------|---------------------------|--|
| LC50 (Inhalation) | Rat | 103,000 mg/m ³ | |
| LD50 (Oral) | Human | 15,000 mg/kg | |

Irritation:

No data available

/

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.

ACGIH: No component 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 component 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other Hazards

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| Organ | Description |
|------------|--|
| Eyes | Irritating to the eyes. |
| Ingestion | May be harmful if ingested. |
| Inhalation | May be harmful if inhaled. Irritating to the respiratory tract. Vapors may cause drowsiness and dizziness. |
| Skin | May be harmful if absorbed through skin. Irritating to the skin. |

12. ECOLOGICAL INFORMATION

- Heptanes 64742-49-0

Ecotoxicity (aquatic and terrestrial, where available):

Acute Fish Toxicity (N-HEPTANE)

LC50 / 24 hours Goldfish - 4 mg/L

Toxicity to Daphnia (N-HEPTANE)

EC50 / 48 hours Water flea - 1.5 mg/L

Persistence and degradability:

No data available

Bioaccumulative potential:

No data available

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. Refer to applicable regional, state and federal codes.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

| | |
|-------------------------------|----------|
| UN number | UN1206 |
| UN proper shipping name | Heptanes |
| Transport hazard class(es) | 3 |
| Packing group (if applicable) | II |

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IMDG

UN-Number: UN1206 Class: 3 Packing Group: II
EMS-No: F-E, S-D
Proper shipping name: HEPTANES
Marine pollutant: Yes

IATA

UN-Number: UN1206 Class: 3 Packing Group: II
Proper shipping name: Heptanes

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards

Flammable liquid, Irritant

All ingredients are on the following inventories or are exempted from listing

| Country | Notification |
|--------------------------|---------------------|
| Australia | AICS |
| Canada | DSL |
| China | IECS |
| European Union | EINECS |
| Japan | ENCS/ISHL |
| Korea | ECL |
| New Zealand | NZIoC |
| Philippines | PICCS |
| United States of America | TSCA |

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard
Fire Hazard

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Pennsylvania Right To Know Components

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n-Heptane CAS-No. 142-82-5 Revision Date 1993-04-24

New Jersey Right To Know Components

Heptane CAS-No. 142-82-5 Revision Date 1993-04-24

California Prop 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION: INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

Disclaimer

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