

**MATERIAL SAFETY DATA SHEET**

Product Name: Heptane

CAS No.: 142-82-5

Version: 0

**1. Identification**

**Product Code** : 90418  
**Company Name** : Advent Chembio Private Limited  
**Address** : W-288, MIDC, TTC INDUSTRIAL AREA, THANE-BELAPUR ROAD, RABALE, NAVI MUMBAI - 400 701.  
**E-mail** : [info@adventchembio.com](mailto:info@adventchembio.com)  
**WEBSITE** : [www.adventchembio.com](http://www.adventchembio.com)  
**Company Phone Number** : 022-27690837

**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
HEPTANE	142-82-5	90- 100%

**3. Hazards Identification****Hazard classification****Physical hazards**

Flammable liquids : Category 2

**Health hazards**

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2

Specific target organ toxicity - single exposure : Category 3

Aspiration hazard : Category 1

**Environmental hazards**

Acute hazards to the aquatic environment : Category 1

Chronic hazards to the aquatic environment : Category 1

**Labels elements****Hazard symbol****Signal word** : Danger**Hazard statement** : Highly flammable liquid and vapor.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
Causes eye irritation.  
May cause respiratory irritation.

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May cause drowsiness or dizziness.

Very toxic to aquatic life with long lasting effects .

**Precautionary statement****Prevention**

- : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves/eye protection/face protection. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment .

**Response**

- : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Collect spillage.

**Storage**

- : Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.

**Disposal**

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal .

**Other hazards which do not result in GHS classification**

- : Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

**4. First Aid Measures****General information**

- : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

**Ingestion**

- : Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs .

**Inhalation**

- : Move to fresh air. Get medical attention if symptoms persist.

**Skin contact**

- : Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.

**Eye contact**

- : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms occur.

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- Most important symptoms/effects, acute and delayed** : Irritating to eyes, respiratory system and skin.
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

**5. Fire fighting measures**

- General fire hazards** : Flammable liquid and vapor.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : Avoid water in straight hose stream; will scatter and spread fire.
- Specific hazards arising from the chemical** : Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental Release Measures**

- Personal precautions, protective equipment and emergency procedures** : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them .
- Methods and material for containment and cleaning up** : Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal .
- Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved .
- Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

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## 7. Handling and Storage

- Precautions for safe handling** : DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

## 8. Exposure Controls Personal Protection

### Control parameters

### Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
Heptane	TWA	400 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	85 ppm 350 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	500 ppm 2000 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	400 ppm 1600 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	500 ppm 2000 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

**Appropriate engineering controls** : No data available.

### Individual protection measures, such as personal protective equipment

- General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
- Eye/face protection** : Wear safety glasses with side shields (or goggles) and a face shield.
- Hand protection** : Chemical resistant gloves .
- Other** : Wear suitable protective clothing.
- Respiratory protection** : In case of inadequate ventilation use suitable respirator.

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**Hygiene measures** : Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned .

**9. Physical and Chemical Properties**

**Appearance** : Colorless liquid.  
**Odor** : Gasoline-like odor .  
**pH** : Not applicable .  
**Melting point/freezing point** : -90.6 °C .  
**Initial boiling point and boiling range** : 98 °C .  
**Flash Point** : -4 °C  
**Vapor pressure** : 6.13 kPa (25 °C) .  
**Vapor density** : 3.5  
**Relative density** : 0.68 (20 °C) .  
**Solubility in water** : 0.003 g/l .  
**Solubility (other)** : No data available.  
**Formula** : C<sub>7</sub>H<sub>16</sub>  
**Molecular Weight** : 100.21

**10. Stability and Reactivity**

**Reactivity** : No dangerous reaction known under conditions of normal use .  
**Chemical stability** : Material is stable under normal conditions.  
**Possibility of hazardous reactions** : Hazardous polymerization does not occur.  
**Conditions to avoid** : Heat, sparks, flames.  
**Incompatible materials** : Strong oxidizers.  
**Hazardous decomposition products** : Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

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**11. Toxicological Information****Information on likely routes of exposure**

- Ingestion** : Harmful or fatal if swallowed.  
**Inhalation** : May cause irritation to the respiratory system.  
**Skin contact** : Causes skin irritation.  
**Eye contact** : Causes eye irritation.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

- Oral Product** : No data available.  
**Dermal Product** : No data available.  
**Inhalation Product** : LD 50 (Mouse, 2 h): 75 mg/l .  
LC 50 (Rat, 4 h): 103 mg/l .  
**Repeated dose toxicity Product** : No data available.  
**Skin corrosion/irritation Product** : Causes skin irritation.  
**Serious eye damage/eye irritation Product** : Causes eye irritation.  
**Respiratory or skin sensitization Product** : Not a skin sensitizer.  
**Carcinogenicity Product** : This substance has no evidence of carcinogenic properties.  
**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE** : No carcinogenic components identified.  
**US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE** : No carcinogenic components identified.  
**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050** : No carcinogenic components identified.  
**Germ cell mutagenicity**  
**In vitro Product** : No mutagenic components identified .  
**In vivo Product** : No mutagenic components identified .  
**Reproductive toxicity Product** : May damage fertility or the unborn child .  
**Specific target organ toxicity - single exposure Product** : Narcotic effect., Respiratory tract irritation.  
**Specific target organ toxicity - repeated exposure Product** : None known.  
**Aspiration hazard Product** : May be fatal if swallowed and enters airways .  
**Other effects** : None known.

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**12. Ecological Information**

**Ecotoxicity**

**Acute hazards to the aquatic environment :**

- Fish Product** : No data available .
- Specified substance(s):HEPTANE** LC 50 (Mozambique tilapia (Tilapia mossambica), 96 h): 375 mg/l Mortality
- LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 4,924 mg/l Mortality
- LC 50 (Carp (Leuciscus idus melanotus), 48 h): 270 mg/l Mortality
- Aquatic invertebrates Product** : No data available.
- Specified substance(s): HEPTANE** : EC 50 (Water flea (Daphnia magna), 96 h): 71.25 - 93.75 mg/l Intoxication
- LC 50 (Water flea (Daphnia magna), 24 h): > 10 mg/l Mortality
- LC 50 (Oligochaete (Branchiura sowerbyi), 96 h): 2,500 mg/l Mortality .

**Chronic hazards to the aquatic environment :**

- Fish Product** : No data available.
- Aquatic invertebrates Product** : No data available.
- Toxicity to Aquatic Plants Product:** : No data available.
- Persistence and degradability**
- Biodegradation Product** : The product is moderately biodegradable.
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : Log Kow: 4.66
- Mobility in soil** : The product is insoluble in water and will spread on the water surface.
- Other adverse effects** : Very toxic to aquatic life with long lasting effects.

**13. Disposal consideration**

<b>Disposal instructions</b>	:	Discharge, treatment, or disposal may be subject to national, state, or local laws.
<b>Contaminated packaging</b>	:	Since emptied containers retain product residue, follow label warnings even after container is emptied.

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## 14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN 1206	Heptanes	3	II	No
<b>IMDG</b>	UN 1206	Heptanes	3	II	No
<b>IATA</b>	UN 1206	Heptanes	3	II	No

## 15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

## 16. Other Information

### NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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