

MATERIAL SAFETY DATA SHEET

Product Name: n-Pentane

CAS No.: 109-66-0

Version: 0

1. Identification

Product Code : 90036, 90197, 90476
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
WEBSITE : www.adventchembio.com
Company Phone Number : 022-27690837

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
n-PENTANE	109-66-0	98- 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 2

Chronic hazards to the aquatic environment : Category 2

Labels elements**Hazard symbol****Signal word** : No signal word.**Hazard statement** : Highly flammable liquid and vapor.
Causes skin and eye irritation.
May cause respiratory irritation.

MATERIAL SAFETY DATA SHEET**Product Name:** n-Pentane**CAS No.:** 109-66-0**Version:** 0

May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Toxic to aquatic life with long lasting effects.

Precautionary statement**Prevention**

- : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Wash hands thoroughly after handling. Keep container tightly closed. Ground/bond container and receiving equipment. Use only non-sparking tools. Use explosion-proof electrical/ventilating/lighting/equipment. Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response

- : If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Collect spillage.

Storage

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

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

- : None .

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 without advice from poison control center. Never give liquid to an unconscious person.

Inhalation

- : Move to fresh air. Get medical attention if symptoms persist. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration.

Skin contact

- : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact

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

Most important symptoms/effects, acute and delayed

- : May cause skin and eye irritation.

MATERIAL SAFETY DATA SHEET**Product Name:** n-Pentane**CAS No.:** 109-66-0**Version:** 0

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. In case of fire and/or explosion do not breathe fumes.

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 : Can be ignited easily and burns vigorously. 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. Heat may cause the containers to explode.

Special protective equipment and precautions for firefighters

Special fire fighting procedures : Use water spray to keep fire-exposed containers cool. 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. Cool containers exposed to flames with water until well after the fire is out.

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. All equipment used when handling the product must be grounded. 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. Avoid discharge into drains, water courses or onto the ground.

MATERIAL SAFETY DATA SHEET

Product Name: n-Pentane

CAS No.: 109-66-0

Version: 0

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. Contact with air and light may form explosive peroxides. If peroxide formation is suspected, do not open or move container. Use personal protective equipment as required. Avoid breathing mists or vapors. Do not taste or swallow. Use only with adequate ventilation. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep away from food, drink and animal feeding stuffs. Prolonged contact with air may cause formation of explosive peroxides. Nitrogen blanketing of containers is recommended. 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
PENTANE	TWA	600 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceil_Time	610 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	120 ppm 350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1,000 ppm 2,950 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	600 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	750 ppm 2,250 mg/m3	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

MATERIAL SAFETY DATA SHEET**Product Name:** n-Pentane**CAS No.:** 109-66-0**Version:** 0

	: 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	: Chemical goggles and face shield are recommended .
Hand protection	: Chemical resistant gloves .
Other	: Wear suitable protective clothing.
Respiratory protection	: In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge and full facepiece.
Hygiene measures	: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and Chemical Properties

Appearance	: Colorless liquid.
Odor	: Gasoline-like odor
pH	: No data available.
Melting point/freezing point	: -129.7 °C
Initial boiling point and boiling range	: 36 °C
Flash Point	: < -40 °C
Vapor pressure	: 68.53 kPa (25 °C)
Vapor density	: 2.49 AIR=1
Relative density	: 0.63 (20 °C)
Solubility in water	: 0.4 g/l
Solubility (other)	: No data available.
Formula	: C ₅ H ₁₂
Molecular Weight	: 72.15 g/mol

10. Stability and Reactivity

Reactivity	: No data available.
Chemical stability	: Material is stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Heat, sparks, flames. Contact with incompatible materials.
Incompatible materials	: Strong oxidizers Strong oxidizing agents. Flammable/combustible material.
Hazardous decomposition products	: Fire or excessive heat may produce hazardous decomposition products.

MATERIAL SAFETY DATA SHEET

Product Name: n-Pentane

CAS No.: 109-66-0

Version: 0

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

- Ingestion** : Harmful if swallowed.
Inhalation : May cause irritation to the respiratory system.
Skin contact : Causes skin irritation.
Eye contact : May cause temporary 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 : LC 50 (Rat, 4 h): 364 mg/l
Repeated dose toxicity Product : No data available.
Skin corrosion/irritation Product : Causes skin irritation.
Serious eye damage/eye irritation Product : Causes serious 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 : No components toxic to reproduction .
Specific target organ toxicity - single exposure Product : No data available.
Specific target organ toxicity - repeated exposure Product : None known.
Aspiration hazard Product : Not classified
Other effects : No data available.

MATERIAL SAFETY DATA SHEET

Product Name: n-Pentane

CAS No.: 109-66-0

Version: 0

12. Ecological Information

Ecotoxicity

Acute hazards to the aquatic environment :

Fish Product : No data available .

Aquatic invertebrates Product : No data available.

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 : There are no data on the degradability of this product.

BOD/COD ratio Product : No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product : No data available on bioaccumulation.

Product

Partition coefficient n-octanol / water (log Kow) Product : Log Kow: 3.39

Mobility in soil

Mobility in soil : No data available .

Other adverse effects : Toxic to aquatic life with long lasting effects.

13. Disposal consideration

Disposal instructions : Discharge, treatment, or disposal may be subject to national, state, or local laws. 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 .

Contaminated packaging : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1265	Pentanes	3	II	No
IMDG	UN 1265	Pentanes	3	II	No
IATA	UN 1265	Pentanes	3	II	No

MATERIAL SAFETY DATA SHEET

Product Name: n-Pentane

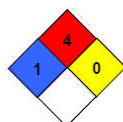
CAS No.: 109-66-0

Version: 0

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

Issue Date :01/08/2014

Version : 0

Disclaimer: This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. ADVENT CHEMBIO PRIVATE LIMITED makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the technical instructor in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of ADVENT CHEMBIO PRIVATE LIMITED and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).