



MATERIAL SAFETY DATA SHEET

PRODUCT NAME: n-PENTANE

CAS Number: 109-66-0

1. IDENTIFICATION:

Product Code : 90476, 90197, 94266, 93065, 94059, 96255, 90036, 98114

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2. HAZARDS IDENTIFICATION:**Hazard classification****Physical hazards**

Flammable liquids : Category 2

Health hazards

Specific target organ toxicity - single exposure, Central nervous system : Category 3

Aspiration hazard : Category 1

Long-term (chronic) aquatic hazard : Category 2

Labels elements :

Hazard symbol : 

Signal word : Danger

Hazard statement : Highly flammable liquid and vapor.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.
Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
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.



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Response	: IF exposed or concerned: Get medical advice/ attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Immediately call a poison center or doctor/physician.
Storage	: Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
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	: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
n-Pentane	109-66-0	NLT 99.0%	Yes

4. FIRST AID MEASURES:

General information	: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion	: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.
Inhalation	: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
Skin contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Eye contact	: The most important known symptoms and effects are described in the labelling.
Most important symptoms/effects, acute and delayed	: No data available.
Indication of immediate medical attention and special treatment needed	

5. FIRE FIGHTING MEASURES:

General information	: Flammable liquid and vapor.
Suitable (and unsuitable) extinguishing media	
Suitable extinguishing media	: Carbon dioxide (CO2), Foam, Dry powder.



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Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards arising from the chemical : Carbon oxides, Combustible.
Pay attention to flashback. Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

Special protective equipment and precautions for firefighters

Special firefighting procedures : 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).
Avoid breathing mists or vapors. Keep upwind. Keep unauthorized personnel away.

Methods and material for containment and cleaning up : Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk.

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.

7. HANDLING AND STORAGE:

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. 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. Do not breathe mist or vapor. 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 dry, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks.

8. EXPOSURE CONTROLS PERSONAL PROTECTION:

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



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	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).
Hand protection	: Chemical resistant gloves.
Other	: Wear suitable protective clothing.
Respiratory protection	: Required when vapours/aerosols are generated. Recommended Filter type: Filter type AX
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. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	: Clear, colorless liquid
Odor	: Benzene like
Solubility	: Partly Miscible in water.
Formula	: C ₅ H ₁₂
Molecular Weight	: 72.15 g/mol
Density	: 0.624 - 0.626 g/cm ³ at 20°C
pH	: No data available
% Volatiles by volume @ 21C (70F)	: No data available
Boiling Point	: 35.0 - 37.0°C
Melting Point	: -129.7°C
Flash Point	: -40 °C
Vapor Density (Air=1)	: 2.49
Vapor Pressure (mm Hg)	: 585.9 @ 21.13°C
Evaporation Rate (BuAc=1)	: No data available

10. STABILITY AND REACTIVITY:

Reactivity	: Vapors may form explosive mixture with air.
Chemical stability	: Material is stable under ambient conditions..
Possibility of hazardous reactions	: No data available
Conditions to avoid	: Warming



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Incompatible materials : Strong oxidizing agents.

Hazardous decomposition products : In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

Oral Product : LD 50 (Rat): 2.000 mg/kg

Dermal Product : No data available.

Inhalation Product : LC 50 (Rat): 25.3 mg/l

Repeated dose toxicity Product : No data available.

Skin corrosion/irritation Product : No skin irritation

Serious eye damage/eye irritation Product : No eye irritation

Respiratory or skin sensitization Product : Buehler Test - Guinea pig
Result: negative

Carcinogenicity Product : No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans : No data available.

US. National Toxicology Program (NTP) Report on Carcinogens : No data available.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : No data available.

Germ cell mutagenicity : Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Test Type: In vivo micronucleus test
Species: Rat
Cell type: Bone marrow Application
Route: inhalation (vapor)



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Result: negative

Reproductive toxicity Product	: No data available.
Specific target organ toxicity - single exposure Product	: May cause drowsiness or dizziness. - Central nervous system
Specific target organ toxicity - repeated exposure Product	: No data available.
Aspiration hazard Product	: May be fatal if swallowed and enters airways. Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.
Additional Information	: Contact with eyes can cause:, Redness, Blurred vision, Provokes tears., Prolonged or repeated contact with skin may cause:, defatting, Dermatitis, Central nervous system depression, Damage to the lungs. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment**

Fish Product	: static test LC50 - Oncorhynchus mykiss (rainbow trout) - 4,26 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	: static test EC50 - Daphnia magna (Water flea) - 2,7 mg/l - 48 h
Toxicity to algae	: static test ErC50 - Selenastrum capricornutum (green algae) - 10,7 mg/l - 72 h static test NOEC - Selenastrum capricornutum (green algae) - 7,51 mg/l - 72 h

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	: Readily 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	: No data available.



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Mobility in soil	:	No data available.
Other adverse effects	:	Biological effects: Endangers drinking-water supplies if allowed to enter soil or water. Discharge into the environment must be avoided. Avoid release to the environment. Do not empty into drains.

13. DISPOSAL CONSIDERATION:

Disposal instructions	:	Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.
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
ADR/RID	UN 1265	n-Pentane	3	II	Yes
IMDG	UN 1265	n-Pentane	3	II	Yes
IATA	UN 1265	n-Pentane	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.

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16. OTHER INFORMATION:

NFPA Hazard ID



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

Issue Date : 21/08/2025

Version : 01

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