



辽宁裕丰化工有限公司

LIAONING YUFENG CHEMICALS COMPANY LIMITED

HAZARDOUS CHEMICAL MATERIAL SAFETY
DATA SHEET
MSDS

CHEMICAL NAME: N-PENTANE

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LIAONING YUFENG CHEMICAL COMPANY LIMITED

Name:	Pentane Material Safety Data Sheet
Synonym:	Amyl hydride; n-Pentane; normal pentane
CAS:	109-66-0

➤ **Section 1 - Chemical Product**

MSDS Name: Pentane

Synonym: Amyl hydride; n-Pentane; normal pentane.

➤ **Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS**

CAS#	Chemical Name	content	EINECS#
109-66-0	n-Pentane	≥95	203-692-4

Hazard Symbols: XN F+ N

Risk Phrases: 12 51/53 65 66 67

➤ **Section 3 - HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

Extremely flammable. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation. Repeated or prolonged exposure may cause drying and cracking of the skin.

Ingestion:

May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea.

Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

Inhalation:

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma.

May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.

Chronic:

Prolonged or repeated skin contact may cause defatting and dermatitis.

Chronic exposure to vapors may produce polyneuropathy.

🔦 Section 4 - FIRST AID MEASURES

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin:

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion:

Potential for aspiration if swallowed. Get medical aid immediately.

Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

🔦 Section 5 - FIRE FIGHTING MEASURES



General Information:

Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Use water spray to keep fire-exposed containers cool. Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Sensitive to static discharge.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. This material is lighter than water and insoluble in water. The fire could easily be spread by the use of water in an area where the water cannot be contained. Do NOT use straight streams of water.

🔦 Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition.

Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

🔦 Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash

before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

👉 **Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION**

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design.

Exposure Limits CAS# 109-66-0: United States OSHA: 1000 ppm TWA; 2950 mg/m³ TWA Belgium - TWA: 600 ppm VLE; 1796 mg/m³ VLE Belgium - STEL: 750 ppm VLE; 2242 mg/m³ VLE France - VME: 600 ppm VME; 1800 mg/m³ VME Germany: 1000 ppm TWA; 3000 mg/m³ TWA Japan: 300 ppm OEL; 880 mg/m³ OEL Netherlands: 600 ppm MAC; 1800 mg/m³ MAC Russia: 300 mg/m³ TWA Spain: 1000 ppm VLA-ED (all isomers); 3000 mg/m³ VLA-ED (all isom Personal Protective Equipment Eyes: Wear chemical splash goggles.

Skin:



Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or

European Standard EN 149. Use a NIOSH/MSHA or European Standard EN

149 approved respirator if exposure limits are exceeded or if irritation or

other symptoms are experienced.

🔗 Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: clear, colorless

Odor: mild odor - gasoline-like - pleasant odor

pH: Not applicable.

Vapor Pressure(kPa): 53.32 @ 18.5 deg C

Viscosity: Not available.

Boiling Point: 36.1 deg C

Freezing/Melting Point: -129.8deg C

Autoignition Temperature: 260 deg C (500.00 deg F)

Flash Point: -49 deg C (-56.20 deg F)

Explosion Limits, lower: 1.5

Explosion Limits, upper: 7.8

Decomposition Temperature: Not available.

Solubility in water: Negligible (0.04% at 20C).

Specific Gravity/Density: 0.63

Molecular Formula: C5H12

Molecular Weight: 72.15

➤ **Section 10 - STABILITY AND REACTIVITY**

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

Ignition sources, excess heat.

Incompatibilities with Other Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

➤ **Section 11 - TOXICOLOGICAL INFORMATION**

RTECS#:

CAS# 109-66-0: RZ9450000 LD50/LC50:

CAS# 109-66-0: Inhalation, rat: LC50 = 364 gm/m³/4H; Oral, rat: LD50 = >2000 mg/kg.

Carcinogenicity:

n-Pentane - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

➤ **Section 12 - ECOLOGICAL INFORMATION**

Ecotoxicity:

Fish: Rainbow trout: LC50 = 9.87 mg/L; 96 Hr.; UnspecifiedFish: Fathead

Minnow: LC50 = 11.59 mg/L; 96 Hr.; UnspecifiedFish: Bluegill/Sunfish: LC50 = 9.99 mg/L; 96 Hr.; UnspecifiedWater flea Daphnia: LC50 = 9.7 mg/L; 48 Hr.;

Unspecified

➤ **Section 13 - DISPOSAL CONSIDERATIONS**

Dispose of in a manner consistent with federal, state, and local regulations.

➤ **Section 14 - TRANSPORT INFORMATION**

IATA

Shipping Name: PENTANES

Hazard Class: 3

UN Number: 1265

Packing Group: II

IMO

Shipping Name: PENTANES

Hazard Class: 3

UN Number: 1265

Packing Group: II

RID/ADR

Shipping Name: PENTANES

Hazard Class: 3

UN Number: 1265

Packing group: II

Marine pollutant: YES

➤ **Section 15 - REGULATORY INFORMATION**

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F+ N

Risk Phrases:



R 12 Extremely flammable.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 29 Do not empty into drains.

S 33 Take precautionary measures against static discharges.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

S 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 109-66-0: 1

Canada

CAS# 109-66-0 is listed on Canada's DSL List.

CAS# 109-66-0 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 109-66-0 is listed on the TSCA inventory.