



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-HEPTANE

MANUFACTURER: LIAONING YUFENG CHEMICAL CO., LTD

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LIAONING YUFENG CHEMICAL COMPANY LIMITED

Name:	Heptane Material Safety Data Sheet
Synonym:	n-Heptane; Normal heptane
CAS:	142-82-5

➤ **Section 1 - Chemical Product**

MSDS Name: N-Heptane

Synonym: Heptane; Normal heptane.

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

CAS#	Chemical Name	content	EINECS#
108-87-2	Methylcyclohexane	≤0.2	203-624-3
142-82-5	N-Heptane	≥99	205-563-8
26635-64-3	Isooctane	≤0.1	247-861-0
28729-52-4	Dimethylcyclopentane	≤0.1	249-193-5

Text for R-phrases: see Section 16

Hazard Symbols: XN F N

Risk Phrases: 11 38 50/53 65 67

➤ **Section 3 - HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

Highly flammable. Irritating to skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness. Dangerous for the environment.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. 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. Causes respiratory tract irritation.



Chronic:

Prolonged or repeated skin contact may cause dermatitis.

🔦 **Section 4 - FIRST AID MEASURES**

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. 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:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

🔦 **Section 5 - FIRE FIGHTING MEASURES**

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. 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. This liquid floats on water and may travel to a source of ignition and spread fire.

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. Water may be ineffective. 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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section.



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. 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.

Storage:

Keep away from sources of ignition. Store in a tightly closed container. 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.

Exposure Limits CAS# 108-87-2: United States OSHA: 500 ppm TWA; 2000 mg/m³ TWA
Belgium - TWA: 400 ppm VLE; 1633 mg/m³ VLE France - VME: 400 ppm VME; 1600 mg/m³ VME
Germany: 200 ppm TWA; 810 mg/m³ TWA Japan: 400 ppm OEL; 1600 mg/m³ OEL
Malaysia: 400 ppm TWA; 1610 mg/m³ TWA Netherlands: 400 ppm MAC; 1600 mg/m³ MAC
Russia: 50 mg/m³ TWA Spain: 400 ppm VLA-ED; 1630 mg/m³ VLA-ED
CAS# 142-82-5: United Kingdom, WEL - TWA: 500 ppm TWA United Kingdom, WEL - STEL: 1500 ppm STEL
United States OSHA: 500 ppm TWA; 2000 mg/m³ TWA Belgium - TWA: 400 ppm VLE; 1664 mg/m³ VLE
Belgium - STEL: 500 ppm VLE; 2085 mg/m³ VLE France - VME: 400 ppm VME; 1600 mg/m³ VME
Germany: 500 ppm TWA; 2100 mg/m³ TWA Japan: 200 ppm OEL; 820 mg/m³ OEL
Malaysia: 400 ppm TWA; 1640 mg/m³ TWA Netherlands: 400 ppm STEL; 1600 mg/m³ STEL
Netherlands: 300 ppm MAC; 1200 mg/m³ MAC Spain: 500 ppm VLA-ED; 2085 mg/m³ VLA-ED
CAS# 26635-64-3: CAS# 28729-52-4: 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

pH: Not available.

Vapor Pressure: 46 mm Hg @ 25 deg C

Viscosity: Not available.

Boiling Point: 98 deg C

Freezing/Melting Point: -91 deg C

Autoignition Temperature: 204 deg C (399.20 deg F)

Flash Point: -4 deg C (24.80 deg F)

Explosion Limits, lower: 1.05%

Explosion Limits, upper: 6.7%

Decomposition Temperature: Not available.

Solubility in water: Negligible.

Specific Gravity/Density: 0.68

Molecular Formula: C7H16

Molecular Weight: 100.21

➤ Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Ignition sources, excess heat, confined spaces.

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# 108-87-2: GV6125000 CAS# 142-82-5: MI7700000 CAS# 26635-64-3 unlisted.

CAS# 28729-52-4 unlisted.

**LD50/LC50:**

CAS# 108-87-2: Draize test, rabbit, eye: 100 uL/24H Mild; Draize test, rabbit, skin: 500 uL/24H Mild; Inhalation, mouse: LC50 = 36900 mg/m³/2H; Inhalation, rabbit: LC50 = 15227 ppm/1H; Oral, mouse: LD50 = 1.2 gm/kg; Oral, rat: LD50 = >3200 mg/kg.

CAS# 142-82-5: Inhalation, rat: LC50 = 103 gm/m³/4H.

CAS# 26635-64-3.

CAS# 28729-52-4.

Carcinogenicity:

Methylcyclohexane - Not listed by ACGIH, IARC, or NTP.

Heptane (n-) - Not listed by ACGIH, IARC, or NTP.

Isooctane - Not listed by ACGIH, IARC, or NTP.

Dimethylcyclopentane - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

➤ Section 12 - ECOLOGICAL INFORMATION**Ecotoxicity:**

Fish: Goldfish: LC50 = 4.0 mg/L; 24 Hr.; UnspecifiedFish: Mosquito Fish: LC50 = 4900 mg/L; 24 Hr.; UnspecifiedFish: LC50 = 4900 mg/L; 24 Hr.; Unspecified

➤ Section 13 - DISPOSAL CONSIDERATIONS

Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

➤ Section 14 - TRANSPORT INFORMATION**IATA**

Shipping Name: HEPTANES

Hazard Class: 3

UN Number: 1206

Packing Group: II

IMO

Shipping Name: HEPTANES

Hazard Class: 3

UN Number: 1206

Packing Group: II

RID/ADR



Shipping Name: HEPTANES

Hazard Class: 3

UN Number: 1206

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 11 Highly flammable.

R 38 Irritating to skin.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

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 60 This material and its container must be disposed of as hazardous waste.

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# 108-87-2: 1

CAS# 142-82-5: 1

CAS# 26635-64-3: 0

CAS# 28729-52-4: No information available.

Canada

CAS# 108-87-2 is listed on Canada's DSL List.

CAS# 142-82-5 is listed on Canada's DSL List.

CAS# 26635-64-3 is listed on Canada's NDSL List.



CAS# 108-87-2 is listed on Canada's Ingredient Disclosure List.
CAS# 142-82-5 is listed on Canada's Ingredient Disclosure List.
CAS# 26635-64-3 is not listed on Canada's Ingredient Disclosure List.
CAS# 28729-52-4 is not listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 108-87-2 is listed on the TSCA inventory.
CAS# 142-82-5 is listed on the TSCA inventory.
CAS# 26635-64-3 is listed on the TSCA inventory.
CAS# 28729-52-4 is not listed on the TSCA inventory.
It is for research and development use only.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F N

Risk Phrases:

R 11 Highly flammable.
R 38 Irritating to skin.
R 48/20 Harmful : danger of serious damage to health by prolonged exposure through inhalation.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 62 Possible risk of impaired fertility.
R 65 Harmful: may cause lung damage if swallowed.
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 36/37 Wear suitable protective clothing and gloves.
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# 110-54-3: 1

Canada

CAS# 110-54-3 is listed on Canada's DSL List.
CAS# 110-54-3 is listed on Canada's Ingredient Disclosure List.



US FEDERAL

TSCA

CAS# 110-54-3 is listed on the TSCA inventory.

➡ **Section 16 OTHER INFORMATION**

Reference date:

China petroleum and chemical corporation security ministry of supervision(Petroleum chemical poison manual)

Solvent device technology regulations/ Post operation procedures

Fill-in Date: 2018.8.31

Fill in DEPT.: Liaoning liaoyang yufeng chemical co., LTD. Solvent device

Data audit unit: office

Edit Description: edition

Validity: 10 years