

## Chemical Safety Data Sheet

### Section 1 IDENTIFICATION

**GHS Product identifier:** Heptane.

**Other means of identification:** /

**Recommended use of the chemical and restrictions on use:**

**Supplier's details:**

**Emergency phone number:** /

### Section 2 HAZARDS IDENTIFICATION

**Classification of the substance or mixture:**

Flammable liquids Category 2

Skin corrosion/irritation Category 2

Specific target organ toxicity – single exposure Category 3 (Narcotic effects)

Aspiration hazard Category 1

Hazardous to the aquatic environment, short-term (Acute) Category 1

Hazardous to the aquatic environment, long-term (Chronic) Category 1.

**GHS Label elements, including precautionary statements:**

Symbol:



Signal word: **Danger**

Hazard statement(s): Highly flammable liquid and vapour. Causes skin irritation. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

**Prevention:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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. Wash ... thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection/ hearing protection.

**Response:**

In case of fire: Use foam, dry powder, carbon dioxide to extinguish. IF SWALLOWED: Immediately call a poison center/doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. Specific treatment (see under for further information). Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Collect spillage.

**Storage:**

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

**Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards which do not result in classification: /**

## Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration%
Heptane	142-82-5	97%
Other hydrocarbons	/	3%

## Section 4 FIRST AID MEASURES

**Description of necessary first aid measures**

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Remove contaminated clothing and rinse with plenty of running water.

**In case of eye contact:** Rinse thoroughly with plenty of running water for at least 15 minutes and consult a physician.

**If ingestion:** Rinse mouth with water. Consult a physician.

**Most important symptoms/effects, acute and delayed: /**

**Indication of immediate medical attention and special treatment needed, if necessary: /**

## Section 5 FIREFIGHTING MEASURES

**Suitable extinguishing media:** Use foam, dry powder, carbon dioxide, etc.

**Special hazards arising from the chemical:** Liquid and vapour are highly flammable. May explode and burn in high temperature and fire and release toxic fumes.

**Special protective actions for fire-fighters:** Firefighters must wear air breathing apparatus, fire-fighting suits and protective gloves to extinguish in the upwind direction. Whenever possible, remove the container from the fire to open space and use spray water to cool unopened containers.

## Section 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** It is recommended that emergency personnel wear protective masks and fire protective overalls. Do not touch the spill directly.

**Environmental precautions:** Isolate contaminated areas and restrict access.

**Methods and materials for containment and cleaning up:** Small amount of leakage: adsorption with sand or other inert materials. Do not allow products to enter restricted areas such as sewers. A large amount of leakage: building a dike or digging a pit to contain. Transfer to a tank truck or special collector with an explosion-proof pump and transport to a waste disposal site for disposal.

## Section 7 HANDLING AND STORAGE

**Precautions for safe handling:** There should be sufficient local exhaust in workplace. Operators should be trained and strictly follow the operating procedures. Operators are advised to wear protective masks, normal protective clothing and rubber gloves. Operators should load and unload lightly during handling to prevent damage to the package. There should be leakage treatment equipment in workplace. There may be harmful residues in empty containers.

**Conditions for safe storage, including any incompatibilities:** Store in a dry, well-ventilated warehouse with Ambient temperature. Keep away from fire and heat. Protect from direct sunlight. The package should be sealed and not exposed to moisture. It should be stored separately from oxidants, flammable materials, etc., and should not be mixed. The storage area should be provided with suitable materials to contain spills.

#### Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Control parameters:

Source	Material name	TWA	STEL
China Occupational Exposure Limits for Hazardous Agents in the Workplace	Heptane	500 mg/m <sup>3</sup>	1000 mg/m <sup>3</sup>

**Appropriate engineering controls:** Close strictly and provide sufficient local exhaust.

##### Individual protection measures

**Eye/face protection:** Wear a protective mask.

**Skin protection:** Wear normal protective clothing.

**Respiratory protection:** Air respirators should be worn during emergency rescue or evacuation.

**Thermal hazards:** /

#### Section 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance (physical state, colour etc)</b>	Colorless transparent liquid.
<b>Odour</b>	/
<b>Odour Threshold</b>	/
<b>pH</b>	/
<b>Melting point/freezing point</b>	-91 °C
<b>Initial boiling point and boiling range</b>	98 °C
<b>Flash point</b>	-4 °C.
<b>Evaporation rate</b>	/
<b>Flammability (solid, gas)</b>	Highly flammable.
<b>Upper/lower flammability or explosive limits</b>	1.1-6.7
<b>Vapour pressure</b>	6.36 @ 25 °C
<b>Vapour density</b>	3.5
<b>Relative density</b>	0.7
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient: n-octanol/water</b>	/
<b>Auto-ignition temperature</b>	215 °C
<b>Decomposition temperature</b>	/
<b>Viscosity</b>	/

#### Section 10 STABILITY AND REACTIVITY

**Reactivity:** /**Chemical stability:** This material is stable in normal temperature.**Possibility of hazardous reactions:** /**Conditions to avoid:** Spark, high temperature and static electricity.**Incompatible materials:** Flammable materials and oxidizers.**Hazardous decomposition products:** Oxycarbides, etc.

## Section 11 TOXICOLOGICAL INFORMATION

**Information on the likely routes of exposure:** Ingestion (swallowing), skin/eye exposure and inhalation.**Symptoms related to the physical, chemical and toxicological characteristics:** /**Acute health effects:**

Ingestion can cause symptoms such as nausea, vomiting and abdominal pain.

Skin contact can cause irritation.

Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness. Acute effects from inhalation of high concentrations of vapour are pulmonary irritation. Serious poisonings may result in respiratory depression and may be fatal.

Eyes contact can cause redness and irritation.

**Chronic health effects:** Repeated or prolonged exposure may damage organs. Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes.**Numerical measures of toxicity (such as acute toxicity estimates):**

Heptane:

LD50(Oral, rat): &gt;5000 mg/kg

LC50(Dermal, rabbit): &gt;2000 mg/kg

## Section 12 ECOLOGICAL INFORMATION

**Toxicity:**

Heptane:

Endpoint	Test Duration (hr)	Species	Value
LC50	96	Fish	0.854mg/L
EC50	48	Crustacea	0.64mg/L
EC50	96	Algae or other aquatic plants	1.323mg/L
NOEC	504	Crustacea	0.17mg/L

**Persistence and degradability:** Heptane: Low.**Bioaccumulative potential:** Heptane: High (LogKOW = 4.66).**Mobility in soil:** Heptane: Low (KOC = 274.7).**Other adverse effects:** /

## Section 13 DISPOSAL CONSIDERATIONS

**Disposal methods:** Dispose this product by safe burial. Damaged containers are prohibited from being reused and should be buried in the prescribed place.

## Section 14 TRANSPORT INFORMATION

**UN number:** 1206.  
**UN proper shipping name:** HEPTANES.  
**Transport hazard class(es):** 3.  
**Packing group, if applicable:** II.  
**Environmental hazards:** Marine pollutant.  
**Special precautions for user:** /

## Section 15 REGULATORY INFORMATION

**Regulations:** This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB 18218-2018, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GB/T 15098-2008, GBZ 2.1-2007, GBZ 2.2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation [Published by the Ministry of Railways, 2008], Dangerous Chemicals Safety Administrative Regulation [Published by the State Council, 2011].

## Section 16 OTHER INFORMATION

<b>References</b>	UN Recommendations on the Transport of Dangerous Goods Model Regulations UN Globally Harmonized System of Classification and Labelling of Chemicals
<b>Form Date</b>	26-Feb-2020

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer/supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information or no data available (such as boiling point does not exist for the solid) in the table with "/" logo.