

**ISO-PENTANE**  
**CAS No. 78-78-4**

## Chemical Safety Data Sheet

### SECTION 1 IDENTIFICATION

**GHS Product identifier:** Isopentane.

**Other means of identification:** /

**Recommended use of the chemical and restrictions on use:** Solvent/foaming agent

**Supplier's details:**

Dongying Liangxin Petrochemical Technology Development Limited Company

Address: No.117 Guangqing Road, Dingzhuang, Guangrao, Dongying City, Shandong Province

Phone: +86 178 1030 0898

**Emergency phone number:** +86 178 1030 0898

### SECTION 2 HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

Flammable Liquids Category 1.

Specific Target Organ Toxicity - Single Exposure Category 3 (Narcotic Effects).

Aspiration hazard Category1.

Hazardous to the Aquatic Environment - Long Term Hazard Category 2.

**GHS Label elements, including precautionary statements**



**Signal word:** Danger.

**Hazard statement(s):** Extremely 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(s):**

**Prevention:**

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. Wear protective gloves/protective clothing/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:**

In case of fire: Use foam, dry chemical powder, carbon dioxide to extinguish. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse.

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Rinse skin with water/shower. Collect spillage.

**Storage:**

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

**Disposal:**

Dispose of contents/container to...

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

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Concentration%
Isopentane	78-78-4	99.5495%

**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:** Immediately remove all contaminated clothing, including footwear. Wash off with soap and plenty of water. Consult a physician.

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

**If swallowed:** Rinse mouth with water. Do NOT induce vomiting. Consult a physician. Avoid giving milk or oils. Avoid giving alcohol.

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

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

**SECTION 5 FIREFIGHTING MEASURES**

**Suitable extinguishing media:** Foam. Dry chemical powder. Carbon dioxide. Water spray or fog - Large fires only.

**Special hazards arising from the chemical:** Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidisers. Vapour forms an explosive mixture with air. Severe explosion hazard, in the form of vapour, when exposed to flame or spark. Vapour may travel a considerable distance to source of ignition. On combustion, may emit toxic fumes of carbon monoxide (CO).

**Special protective actions for fire-fighters:** Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control the fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

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#### SECTION 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes.

**Environmental precautions:** Prevent, by any means available, spillage from entering drains or water courses.

**Methods and materials for containment and cleaning up:** Stop leak if safe to do so. Water spray or fog may be used to disperse /absorb vapour. Contain spill with sand, earth or vermiculite. Use only spark-free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

#### SECTION 7 HANDLING AND STORAGE

**Precautions for safe handling:** Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers.

**Conditions for safe storage, including any incompatibilities:** Store in original containers in approved flame-proof area. No smoking, naked lights, heat or ignition sources. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. Keep containers securely sealed. Store away from incompatible materials in a cool, dry well ventilated area. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

#### SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters:**

**OCCUPATIONAL EXPOSURE LIMITS (OEL):**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
China Occupational Exposure Limits for Hazardous Agents in the Workplace	isopentane	Pentane (all isomers)	500 mg/m <sup>3</sup>	1000 mg/m <sup>3</sup>	Not Available	Not Available

**EMERGENCY LIMITS:**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
isopentane	Isopentane; (Ethyl dimethylmethane; 2-Methylbutane)	600 ppm	610 ppm	4400 ppm

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**Appropriate engineering controls:** For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

#### Personal protective equipment

**Eye/face protection:** Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.

**Skin protection:** Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.

**Respiratory protection:** Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant.

**Thermal hazards:** /

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Colorless transparent liquid
<b>Odour</b>	/
<b>Odour Threshold</b>	/
<b>pH</b>	/
<b>Melting point/freezing point</b>	-159.89°C
<b>Initial boiling point and boiling range</b>	24-32°C
<b>Flash point</b>	<10.0°C
<b>Evaporation rate</b>	13 BuAc=1
<b>Flammability (solid, gas)</b>	HIGHLY FLAMMABLE
<b>Upper/lower flammability or explosive limits</b>	Upper 8.3%; Lower 1.32% 79.3 @ 21.1°C
<b>Vapour pressure</b>	2.48 (AIR=1)
<b>Vapour density</b>	0.62 (WATER=1)
<b>Relative density</b>	Immiscible
<b>Water solubility</b>	/
<b>Partition coefficient: octanol/water</b>	/
<b>Autoignition temperature</b>	420°C
<b>Decomposition temperature</b>	/
<b>Viscosity</b>	

## SECTION 10 STABILITY AND REACTIVITY

**Reactivity:** /

**Chemical stability:** Product is considered stable under normal handling conditions.

**Possibility of hazardous reactions:** Hazardous polymerisation will not occur.

**Conditions to avoid:** Heat, flames and sparks.

**Incompatible materials:** Strong bases, oxidising agents.

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**Hazardous decomposition products:** carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Information on the likely routes of exposure:** Inhaled, Ingestion, skin, eyes.

**Symptoms related to the physical, chemical and toxicological characteristics:** /

**Acute health effects**

**Inhalation:** Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.

**Ingestion:** Accidental ingestion of the material may be damaging to the health of the individual.

**Skin:** The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.

**Eyes:** Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

**Chronic health effects:** Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

**Numerical measures of toxicity (such as acute toxicity estimates):**

Inhalation (rat) LC<sub>50</sub>: 280 mg/L/4hr

Oral (rat) LD<sub>50</sub>: >2000 mg/kg

**SECTION 12 ECOLOGICAL INFORMATION**

**Toxicity:** Toxic to aquatic life with long lasting effects.

**Persistence and degradability:** Water/Soil: HIGH. Air: HIGH.

**Bioaccumulative potential:** LOW.

**Mobility in soil:** LOW.

**Other adverse effects:** /

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Disposal methods:** Recycle wherever possible or consult manufacturer for recycling options.

Consult Land Waste Authority for disposal. Bury or incinerate residue at an approved site. Recycle containers if possible, or dispose of in an authorised landfill.

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**SECTION 14 TRANSPORT INFORMATION**

**UN number:** 1265.

**UN proper shipping name:** PENTANES, liquid.

**Transport hazard class(es):** 3.

**Packaging group:** I.

**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 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2009, GB 15258-2009, GB 6944-2012, GB 190-2009, GB 191-2009, GB 12268-2008, GA 57-1993, GBZ 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>	"Model Regulations on the Transport of Dangerous Goods" "The Globally Harmonized System of Classification and Labelling of Chemicals"
<b>Form Date</b>	01-Sep.-2016

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 (such as boiling point does not exist for the solid) in the table with "/" logo.