



Henan Lvbang Fine Chemical Co., Ltd

No.2004 Puzhou Road, Fanxian County Industrial Cluster Park, Puyang City, Henan Province, China

SAFETY DATA SHEET

Revision Date Jan 01, 2026

SDS Number: 2026-009

Product Name: 2 - Methylbutane

Version: The First Edition in 2026

Section 1. Identification

GHS product identifier: 2 - methylbutane

Chemical name: isopentane

English name of chemical: 2 - methylbutane, sopentane;

CAS No: 78-78-4

Molecular formula: C₅H₁₂

Relative molecular weight: 72.2

Technical Specification Number: 2024 - 009

Supplier Name: Henan Lvbang Fine Chemical Co., Ltd

Supplier Address : Fanxian County Industrial Cluster Park, Puyang City, Henan Province, China

Supplier phone number: 0393-8205508

Postcode: 457500 **Supplier Fax:** 0393-8205508

E-mail address: hnlbjxhg@163.com

Chemical accident emergency consultation line: 0532-83889090

Recommended and restricted use: Used in organic synthesis, also as a solvent and a foaming agent for polystyrene.

Section 2. Hazards identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. May cause drowsiness or dizziness. Swallowing and inhalation into the respiratory tract can be fatal.

GHS Hazard Category: Flammable liquids, category 1; Specific target organ toxicity - single exposure, category 3 (narcotic effects); Inhalation hazard, category 1; Hazardous to the aquatic environment - acute hazard, category 2; Hazardous to the aquatic environment - long - term hazard, category 2

Labeling elements:

Pictograms:



Henan Lvbang Fine Chemical Co., Ltd

No.2004 Puzhou Road, Fanxian County Industrial Cluster Park, Puyang City, Henan Province, China



WARNING WORD: Danger

Hazard Statement: Extremely flammable liquid and vapor. May cause drowsiness or dizziness. Swallowing and entering the respiratory tract can be fatal. Toxic to aquatic organisms and has long - lasting effects.

Precautionary statement:

Preventive measures: Keep away from heat sources, sparks, open flames, and hot surfaces. No smoking. Keep the container closed. Ground the container and receiving equipment. Use explosion - proof electrical, ventilation, and lighting equipment. Only use tools that do not produce sparks. Take measures to prevent static electricity. Wear protective gloves, protective glasses, and a protective face mask. Do not discharge into the environment.

Accident response: In case of fire, use foam, carbon dioxide, dry powder, or sand to extinguish the fire. In case of skin (or hair) contact: Immediately remove all contaminated clothing and rinse the skin with water, take a shower. If swallowed: Do not induce vomiting, immediately call the poison control center or seek medical attention. Collect the leakage.

Safe storage: Store in a well - ventilated place. Keep at a low temperature. Store under lock.

Waste disposal: This product, its contents, and the container shall be disposed of in accordance with national and local regulations.

Physical And Chemical Hazards: Extremely flammable. Its vapor can mix with air to form an explosive mixture.

Health Hazards:

Acute poisoning: Mainly has anesthetic and mild irritant effects. It can cause irritation symptoms in the eyes and respiratory tract. In severe cases, there are anesthetic symptoms and even loss of consciousness. Inhaling liquid of this product into the respiratory tract can cause aspiration pneumonia.

Chronic effects: Mild irritation to the eyes and respiratory tract. Long - term skin contact can cause mild dermatitis.

Environmental hazard: Toxic to aquatic organisms and has long - term persistent effects.

Section 3. Composition/information on ingredients

√ Substances

Mixtures

Hazardous components	Concentration or concentration range	CAS No.

2 - methylbutane	≥99%	78-78-4
------------------	------	---------

Section 4. First aid measures

dermal contact	Immediately take off the contaminated clothing and rinse thoroughly with running clean water. Seek medical attention.
eye contact	Immediately separate the eyelids and rinse thoroughly with running clean water or normal saline. Seek medical attention.
Inhalation	Quickly leave the site to a place with fresh air. Keep the respiratory tract unobstructed. If having difficulty in breathing, administer oxygen. If breathing and heartbeat stop, immediately perform cardiopulmonary resuscitation. Seek medical attention.
Ingestion	Rinse the mouth and drink water. Do not induce vomiting. Seek medical attention.
Advice on protecting the rescuer	Use personal protective equipment as required.
Special tips for doctors	Provide symptomatic treatment.

Section 5. Fire-fighting measures

Hazardous Characteristics	It reacts strongly when in contact with oxidants, and may even cause combustion. The vapor is heavier than air, spreads along the ground and is easy to accumulate in low - lying areas. When encountering a fire source, it will catch fire and backfire. In case of high temperature, the internal pressure of the container will increase, and there is a risk of cracking and explosion. Combustion will produce harmful carbon monoxide.
Hazardous combustion products	No data available.
Extinguishing agent	Use foam, carbon dioxide, dry powder and sand to extinguish the fire.
Fire extinguishing precautions and protective measures	Firefighters must wear air breathing apparatus and full - body fire - proof and gas - proof clothing, and extinguish the fire in the upwind direction. Spray water to cool the container and move the container from the fire scene to an open place as far as possible. If the container
	suddenly makes abnormal sounds or shows abnormal phenomena, it should be evacuated immediately. Water is ineffective for extinguishing the fire.

Henan Lybang Fine Chemical Co., Ltd

No.z004 Puzhou Road,Fanxian County Industrial Cluster Park,Puyang City,Henan Province,China

Section 6. Accidental release measures

Operator Protective Measures, Equipment and Emergency Response Procedures	Eliminate all ignition sources. Demarcate a warning area according to the influence area of liquid flow and vapor diffusion. Unrelated personnel should evacuate from the cross - wind and upwind directions to the safe area. It is recommended that emergency response personnel wear positive - pressure self - contained breathing apparatus, anti - static clothing, and rubber oil - resistant gloves. All equipment used during operations should be grounded. Do not touch or step over the leakage. Cut off the leakage source as much as possible.
Environmental protection measures	Prevent the leakage from entering water bodies, sewers, basements or confined spaces.
Color containment of spilled chemicals, removal methods and disposal materials used	For small - quantity leakage: Absorb with sand or other non - flammable materials, and use clean non - sparking tools to collect the absorbing materials. For large - quantity leakage: Build a dike or dig a pit for containment. Cover with foam to reduce evaporation. Spraying water mist can reduce evaporation, but it cannot reduce the flammability of the leakage in a confined space. Transfer with an explosion - proof pump to a tank truck or a special collector.

Section 7. Handling and storage

Handling Precautions	Operate in a closed system with comprehensive ventilation. Operators must receive special training and strictly abide by the operating procedures. It is recommended that operators wear self - suction filtering gas masks (half - face masks), chemical safety goggles, anti - static work clothes, and rubber oil - resistant gloves. Keep away from fire sources and heat sources. Smoking is strictly prohibited in the workplace. Use explosion - proof ventilation systems and equipment. Prevent vapor from leaking into the air in the workplace. Avoid contact with oxidants. When filling, the flow rate should be controlled, and a
----------------------	---



Henan Lvbang Fine Chemical Co., Ltd

No.2004 Puzhou Road, Fanxian County Industrial Cluster Park, Puyang City, Henan Province, China

	grounding device should be installed to prevent the accumulation of static electricity. During handling, load and unload gently to prevent damage to the packaging and containers. Equip with the corresponding types and quantities of fire - fighting equipment and leakage emergency treatment equipment. Empty containers may retain harmful substances.
Storage Precautions	Store in a cool and ventilated warehouse. Keep away from fire sources and heat sources. The warehouse temperature should not exceed 29 °C. Keep the container sealed. Store separately from oxidants and avoid mixed storage. Use explosion - proof lighting and ventilation facilities. Do not use mechanical equipment and tools that are prone to generating sparks. The storage area should be equipped with leakage emergency treatment equipment and suitable containment materials.

Section 8. Exposure controls/personal protection

Occupational Exposure Limits	China PC - TWA: 500mg/m ³ ; PC - STEL: 1000mg/m ³ USA (ACGIH) TLV - TWA: 600ppm
Biological exposure limit value	No standard has been formulated.
Monitoring methods	Method for determination of toxic substances in air: No standard has been formulated. Biological monitoring and testing method: No standard has been formulated.
Engineering Controls	The production process is carried out in a closed environment with comprehensive ventilation. Provide safe shower and eyewash facilities.
Individual protective equipment	The production process is carried out in a closed environment with comprehensive ventilation. Provide safe shower and eyewash facilities. Respiratory protection: When the concentration in the air is relatively high, a filtering gas mask (half - face mask) should be worn. Eye protection: Wear chemical safety goggles when necessary. Skin and body protection: Wear anti - static work clothes. Hand protection: Wear rubber oil - resistant gloves.

Section 9. Physical and chemical properties

Appearance and properties	It is a colorless, transparent, and volatile liquid with a pleasant aromatic odor.		
pH (indicated concentration)	Not significant	Melting/freezing point (°C)	-159.9

Boiling point, initial boiling point and boiling range (°C)	27.8	Relative vapor density (air=1)	2.48
Heat of combustion (kJ/mol)	-3504.1	Relative density (water = 1)	0.62
Critical pressure (MPa)	3.33	Saturated vapor pressure (kPa)	79.31 (21.1°C)
Flash Point (°C)	-51	Critical temperature (°C)	187.8
Decomposition temperature (°C)	No information available	n-octanol/water partition coefficient	2.3
Lower explosion limit [% (V/V)]	1.4	Explosive Limit [% (V/V)]	7.6
Flammability (solid, gas)	flammable	Self-ignition temperature (°C)	420
solubility	It is insoluble in water, slightly soluble in ethanol, and soluble in most organic solvents such as hydrocarbons and ether.	Viscosity(mPa-s)	0.214(20°C)

Section 10. Stability and reactivity

Chemical stability	The product is stable
prohibition material	Strong oxidizing agents, strong acids, strong alkalis, and halogens.
Conditions for avoiding exposure	No information available
hazardous reaction	Contact with strong oxidizers, halogens and other prohibited compounds may result in fire and explosion.
hazardous product	No information available

Section 11. Toxicology information

acute toxicity	LC50: 280000mg/m ³ (rats, inhalation, 4 hours); 150000mg/m ³ (mice, inhalation, 2 hours)
Skin irritation or corrosion	No information available
Eye irritation or corrosion	No information available



Henan Lvbang Fine Chemical Co., Ltd

No.2004 Puzhou Road, Fanxian County Industrial Cluster Park, Puyang City, Henan Province, China

Breathing or skin allergies	No information available
germ cell mutagenicity	No information available
carcinogenicity	No information available
reproductive toxicity	No information available
Specific target organ system toxicity - single exposure	No information available
Specific target organ system toxicity - repeated exposure	No information available
inhalation hazard	No information available

Section 12. Ecological information

Ecotoxicity	Based on structurally similar substances, it is predicted that this substance is toxic to aquatic organisms.
Persistence and degradability	Biodegradability: No data available. Non - biodegradability: In the air, when the concentration of hydroxyl radicals is 5.00×10^5 per/cm ³ , the degradation half - life is 4.2 days (theoretical).
Potential bioaccumulation	Based on the Kow value, it is predicted that the bioaccumulation potential of this substance may be weak.
Mobility in soil	Based on the Koc value, it is predicted that this substance may have a certain degree of mobility. No data available.
Other harmful effects:	No data.

Section 13. Disposal considerations

Waste chemicals	It is recommended to dispose of it by incineration.
Contaminated packaging	Return the container to the manufacturer or dispose of it in accordance with national and local regulations.
Disposal Precautions	Before disposal, relevant national and local regulations should be referred to. Return empty containers to the manufacturer.

Section 14. Transport information

United Nations Dangerous Goods No. (UN No.)	1265
United Nations risk category	3
United Nations shipping name	pentane

Packaging category	I
Package Marking	
Packaging method	Steel Cylinders
Marine pollutants (Yes/No)	No
Transportation Precautions	During transportation, the transport vehicles should be equipped with the corresponding types and quantities of fire - fighting equipment and leakage emergency treatment equipment. It is best to transport in the morning or evening in summer. The tank truck used for transportation should have a grounding chain, and a perforated partition plate can be set in the tank to reduce the static electricity generated by vibration. It is strictly prohibited to mix and transport with oxidants, etc. During transportation, it should be protected from sunlight, rain, and high temperature. When stopping on the way, it should be kept away from fire sources, heat sources, and high - temperature areas. The exhaust pipe of the vehicle loading this item must be equipped with a flame arrester, and it is prohibited to use mechanical equipment and tools that are easy to generate sparks for loading and unloading. During highway transportation, it should be driven according to the specified route and not stay in residential areas and densely populated areas. During railway transportation, coasting is prohibited. It is strictly prohibited to transport in bulk by wooden boats or cement boats.

Section 15. Regulatory information

Regulatory Information	The following laws, regulations and standards provide for the safe use, storage, transportation, loading and unloading, classification and marking of chemicals: Law of the People's Republic of China on Prevention and Control of Occupational Diseases: Classification catalog of occupational diseases : Not included Possible occupational diseases: None Regulations on the Safe Management of Dangerous Chemicals : Catalog of Hazardous Chemicals: Included Explosive hazardous chemicals: Not included Key regulatory hazardous chemicals: Not included GB18218-2018 Hazardous source identification: Critical amount (t):
---------------------------	--



Henan Lvbang Fine Chemical Co., Ltd

No.z004 Puzhou Road,Fanxian County Industrial Cluster Park,Puyang City,Henan Province,China

	10 Regulations on Labor Protection in Workplaces with Drugs: Catalog of highly toxic substances: not included Regulations on the management of easy-to-control toxic chemicals: Catalog of easy-to-control toxic chemicals: not included International Conventions Stockholm Convention: Not included Rotterdam Convention: Not included Montreal Protocol: Not included
--	--

Section 16. Other information

Preparation and development of information:	
Date of formulation	June 10, 2024
Formulation of instructions	This SDS is compiled in accordance with the standards such as the Content and Sequence of Items in the Technical Instructions for Chemical Safety (GB/T16483-2008) and the Content and Sequence of Items in the Technical Instructions for Chemical Safety (GB/T16483-2008). Among them, the results of GHS classification of chemicals are based on the classification carried out by itself in accordance with the Guidelines for the Implementation of the Catalog of Hazardous Chemicals (2015 Edition) (for trial implementation) and the Specification for the Classification and Labeling of Chemicals (GB30000.2-2013 to GB30000.29-2013 series of standards).
bibliography	1、Regulations on Safety Management of Dangerous Chemicals 2、Guidelines for the Preparation of Technical Instructions on Chemical Safety (GB/T17519-2013) 3、Contents and Item Order of Chemical Safety Technical Instructions (GB/T16483-2008) 4、《Chemical Classification and Labeling Specifications》(GB30000.2-2013~GB30000.29-2013 series of standards) 5. The Third Edition of the Complete Book of Safety Technology for Hazardous Chemicals

Abbreviation Description:

MAC: The concentration of a toxic chemical that should not be exceeded at a workplace at any time during a workday.

PC-TWA: means the average permissible exposure concentration for an 8-h working day and a 40-h working week, using time as a weight.

PC-STEL: The concentration at which short-term (15min) exposure is permitted in compliance with the PC-TWA.

Tel: (86) 0393-8205508 Fax: (86) 0393-8205508



Henan Lvbang Fine Chemical Co., Ltd

No.2004 Puzhou Road, Fanxian County Industrial Cluster Park, Puyang City, Henan Province, China

TLV-C: The limit value that must not be exceeded instantaneously. It is specified for certain substances such as irritant gases or substances with predominantly acute effects.

TLV-TWA: is the time-weighted average concentration of 8 hours of work per day or 40 hours of work per week, at which repeated exposure over a lifetime of work does not cause adverse effects in almost all workers.

TLV-STEL: is the maximum concentration at which continuous worker exposure for 15 min is permitted while ensuring compliance with the TLV-TWA. This concentration should not be exceeded more than four times per workday with a minimum of 60 min between exposures. it is a supplement to the TLV-TWA.

IARC: means International Agency for Research on Cancer.

RTECS: refers to the National Institute for Occupational Safety and Health's Chemical Toxicity Database.

HSDB: refers to the Hazardous Substances Database of the U.S. National Library of Medicine.

ACGIH: refers to the American Conference of Governmental Industrial Hygienists.

Disclaimer:

The information in this SDS applies only to the product specified and does not apply to mixtures of this product with other substances, etc., unless otherwise specified. This SDS provides information on the safety of use of the product only to those who have been properly trained in the use of the product. Users of this SDS must make independent judgment on the applicability of this SDS under special conditions of use. The authors of this SDS are not responsible for injuries resulting from the use of this SDS under special conditions of use.