SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 12.02.2025
Revised on : 22.03.2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name	Methyl Cyclohexane
Product Number	PSR28273
Brand	PureSynth research chemicals
CAS No.	108-87-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Standard for GC

1.3 Details of the supplier of the safety data sheet

Company **PureSynth Research Chemicals GmbH**

64683 Einhausen Marie-Curie-StraBe. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

Skin irritation (Category 2), H315

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

Aspiration hazard (Category 1), H304

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P273	Avoid release to the environment.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P331	Do NOT induce vomiting.
Supplemental Hazard Statements	none

2.3 **Other hazards:** This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
Hexahydrotoluene	C_7H_{14}	108-87-2

Component	Classification	Concentration
methylcyclohexane	Flam. Liq. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1; Aquatic Acute 1; Aquatic Chronic 1; H225, H315, H336, H304, H400, H410, H410 M-Factor - Aquatic Acute: 1 M-Factor - Aquatic Chronic: 1	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
If swallowed	After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Fire fighting measures

Extinguishing media **Suitable extinguishing media**	Carbon dioxide (CO_2) Foam Dry powder
Special hazards arising from the substance or mixture	Carbon oxides Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.
Advice for fire-fighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information	Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.
Specific end use(s)	Storage class (TRGS 510): 3: Flammable liquids Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls / Personal protection

Control parameters	Components with workplace control parameters
Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment:	

Eye / face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Control of environmental exposure	Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

Appearance	Form: Liquid Colour: Colourless
Odour	Aromatic
pH - Value	No data available
Density	0.77 g/cm3 at 25 °C - lit
Boiling Point	101 °C - lit.
Melting Point	-126 °C - lit
Solubility in water	0.014 g/l at 25 °C
Flash point	-4 °C
Vapour pressure	61.8 hPa at 25 °C
Auto -ignition temperature	No data available
Vapour density	No data available
Flammability (solid, gas)	Upper explosion limit: 103 %(V) Lower explosion limit: 1.5 %(V)
Evaporation rate	No data available
Partition coefficient: n- octanol / water	log Pow: 3.6 at 25 °C - Bioaccumulation is not expected
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0.679 mPa.s at 20 °C
Explosive properties	No data available
Upper / lower flammability or explosive limits	Upper explosion limit: 6.7 %(V) Lower explosion limit: 1.1 %(V)
Oxidizing properties	No data available

Other safety information: surface tension 23.29 mN/m at 25 °C
Relative vapour density 3.4

SECTION 10: Stability and reactivity

Reactivity	Vapors may form explosive mixture with air.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature).
Possibility of hazardous reactions	Risk of explosion with: Oxygen Exothermic reaction with: Oxidizing agents fire-promoting substances
Condition to avoid	Warming.
Incompatible materials	Various plastics
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	Oral: No data available LC50 Inhalation - Rat - male - 4 h - > 52.6 mg/l - vapor LD50 Dermal - Rabbit - > 86.000 mg/kg
Skin corrosion/irritation	Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation	Eyes - Rabbit Result: No eye irritation Remarks: The value is given in analogy to the following substances: Cyclohexane Remarks: Possible damages: slight irritation
Respiratory or skin sensitization	Buehler Test - Guinea pig Result: Does not cause skin sensitization. Remarks: The value is given in analogy to the following substances: Cyclohexane
Germ cell mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Test Type: Mutagenicity (mammal cell test): chromosome aberration. Metabolic activation: with and without metabolic activation Result: negative
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness. - Central nervous system
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. RTECS: GV6125000 prolonged or repeated exposure can cause:, narcosis To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Systemic effects: narcosis Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	Semi-static test LC50 - Oryzias latipes (Orange-red killifish) – 2.07 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	Semi-static test EC50 - Daphnia magna (Water flea) – 0.326 mg/l - 48 h
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (algae) – 0.134 mg/l - 72 h static test NOEC - Pseudokirchneriella subcapitata (algae) – 0.0221 mg/l - 72 h
Toxicity to bacteria	static test NOEC - activated sludge – 2.755 mg/l - 14 d
Persistence and degradability	No data available
Biodegradability	Aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable.
Bio accumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent

and very bio accumulative (vPvB) at Levels of 0.1% or higher.

Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other adverse effects

SECTION 13: Disposal considerations

Waste treatment methods Products Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleansed containers like the product itself.

Contaminated packaging Dispose of as unused product.

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	2296	METHYLCYCLOHEXANE	3	II	Yes
IMDG	2296	METHYLCYCLOHEXANE	3	II	Yes
IATA	2296	Methylcyclohexane	3	II	No

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European	: FLAMMABLE LIQUIDS
Parliament and of the Council on the control of	: ENVIRONMENTAL HAZARDS
major-accident hazards involving dangerous	: ENVIRONMENTAL HAZARDS
Substances.	: FLAMMABLE LIQUIDS

Chemical safety assessment
For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

The information in this SDS is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The user must be determined suitability of this information for his application.