

# OTTO CHEMIE PVT LTD

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-----ISO 9001: 2015-----

## MATERIAL SAFETY DATA SHEET

### 1. Identification

1.1 GHS Product identifier  
Methyl cyclohexane, 98%  
Code M 2048

### 2. Hazard identification

2.1 Classification of the substance or mixture  
Flammable liquids, Category 2  
Skin irritation, Category 2  
Aspiration hazard, Category 1  
Specific target organ toxicity (single exposure), Category 3  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2  
2.2 GHS label elements, including precautionary statements  
Pictogram(s)



### Signal word

Hazard statement(s)

Danger  
H225 Highly flammable liquid and vapour  
H315 Causes skin irritation  
H304 May be fatal if swallowed and enters airways  
H336 May cause drowsiness or dizziness  
H411 Toxic to aquatic life with long lasting effects

### Precautionary statement(s)

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash ... thoroughly after handling.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P370+P378 In case of fire: Use ... to extinguish.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/2026  
P331 Do NOT induce vomiting.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER/doctor/2026 if you feel unwell.  
P391 Collect spillage.

### Response

### Storage

### Disposal

2.3 Other hazards which do not result in classification  
none

### 3. Composition/information on ingredients

#### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
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Methylcyclohexane	Methylcyclohexane	108-87-2	none	100%
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#### 4. First-aid measures

##### 4.1 Description of necessary first-aid measures

###### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

###### If inhaled

Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

###### In case of skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

###### In case of eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

###### If swallowed

Rinse mouth. Rest. Refer for medical attention.

##### 4.2 Most important symptoms/effects, acute and delayed

Harmful if inhaled or swallowed. Vapor or mist is irritating to the eyes, mucous membrane and upper respiratory tract and skin.

Narcotic effects and dermatitis. (USCG, 1999)

##### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

###### Absorption, Distribution and Excretion

METHYLCYCLOHEXANE IS ABSORBED BY INHALATION. A SMALL FRACTION IS EXHALED, ANOTHER FRACTION EXCRETED IN URINE UNCHANGED ... MOST THAT GETS INTO BLOOD IS METABOLIZED AND EXCRETED IN URINE AS CONJUGATES OF GLUCURONIC ACID OR SULFURIC ACID.

#### 5. Fire-fighting measures

##### 5.1 Extinguishing media

###### Suitable extinguishing media

FOAM, CARBON DIOXIDE, DRY CHEMICAL

##### 5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Vapor may travel considerable distance to a source of ignition and flashback containing explosion may occur during fire conditions. Forms explosive mixtures in air. (USCG, 1999)

##### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 6. Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

##### 6.2 Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance.

Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in dry sand or inert absorbent. Then store and dispose of according to local regulations. Do NOT wash away into sewer.

##### 6.3 Methods and materials for containment and cleaning up

Absorb on paper. Evaporate on a glass or iron dish in hood. Burn the paper.

#### 7. Handling and storage

##### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

##### 7.2 Conditions for safe storage, including any incompatibilities

Fireproof. Separated from strong oxidants. Storage rooms should be banded to prevent the spread of escaping liquid & electrical installations should be of flameproof type.

#### 8. Exposure controls/personal protection

##### 8.1 Control parameters

###### Occupational Exposure limit values

Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 400 ppm (1600 mg/cu m)

###### Biological limit values

no data available

##### 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

##### 8.3 Individual protection measures, such as personal protective equipment (PPE)

###### Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

###### Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

Wear dust mask when handling large quantities.

#### Thermal hazards

no data available

#### 9. Physical and chemical properties

Physical state	colourless liquid
Colour	COLORLESS LIQUID
Odour	Faint, benzene-like odor.
Melting point/ freezing point	-127\u00b0C(lit.)
Boiling point or initial boiling point and boiling range	101\u00b0C(lit.)
Flammability	Class IB Flammable Liquid: F.I.P. below 22.78\u00b0C and BP at or above 37.78\u00b0C.Highly flammable
Lower and upper explosion limit / flammability limit	Lower 1.2%; Upper 6.7%
Flash point	-4\u00b0C
Auto-ignition temperature	285\u00b0C
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Insoluble (NIOSH, 2016)
Partition coefficient n-octanol/water (log value)	log Kow = 3.61
Vapour pressure	83.29 mm Hg (USCG, 1999)
Density and/or relative density	0.77g/ml at 25\u00b0C(lit.)
Relative vapour density	3.4 (vs air)
Particle characteristics	no data available

#### 10. Stability and reactivity

##### 10.1 Reactivity

no data available

##### 10.2 Chemical stability

Stable under recommended storage conditions.

##### 10.3 Possibility of hazardous reactions

**DANGEROUS /FIRE HAZARD/ WHEN EXPOSED TO HEAT, FLAME, OR OXIDIZER** The vapour is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated. Saturated aliphatic hydrocarbons, such as METHYLCYCLOHEXANE, may be incompatible with strong oxidizing agents like nitric acid. Charring of the hydrocarbon may occur followed by ignition of unreacted hydrocarbon and other nearby combustibles. In other settings, aliphatic saturated hydrocarbons are mostly unreactive. They are not affected by aqueous solutions of acids, alkalis, most oxidizing agents, and most reducing agents.

##### 10.4 Conditions to avoid

no data available

##### 10.5 Incompatible materials

Strong oxidizers

##### 10.6 Hazardous decomposition products

no data available

#### 11. Toxicological information

##### Acute toxicity

Oral: no data available

Inhalation: LC25 Rabbit inhalation 7300 ppm, 6 hr/day, 5 day/wk, 2 wk

Dermal: no data available

##### Skin corrosion/irritation

no data available

##### Serious eye damage/irritation

no data available

##### Respiratory or skin sensitization

no data available

##### Germ cell mutagenicity

no data available

##### Carcinogenicity

no data available

##### Reproductive toxicity

no data available

##### STOT-single exposure

no data available

##### STOT-repeated exposure

no data available

##### Aspiration hazard

no data available

## 12. Ecological information

### 12.1 Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

Biodegradation: 75% after 192 hr at 13°C (initial concentration: 0.05 ug/l)

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Other adverse effects

no data available

## 13. Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## 14. Transport information

### 14.1 UN Number

ADR/RID: UN2296

IMDG: UN2296

IATA: UN2296

### 14.2 UN Proper Shipping Name

ADR/RID: METHYLCYCLOHEXANE

IMDG: METHYLCYCLOHEXANE

IATA: METHYLCYCLOHEXANE

### 14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

### 14.4 Packing group, if applicable

ADR/RID: II

IMDG: II

IATA: II

### 14.5 Environmental hazards

ADR/RID: yes

IMDG: yes

IATA: yes

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

## 15. Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Methylcyclohexane	Methylcyclohexane	108-87-2	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.

## Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.