



Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Methylcyclohexane
SDS No. : 4921E-4

Relevant identified uses of the substance or mixture and uses advised against
Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN
Division: Chemical Safety Management Department
Telephone number: +81-6-6946-8061
FAX: +81-6-6946-1607

Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS

Flammable liquids: Category 2

HEALTH HAZARDS

Acute toxicity (Inhalation): Category 4

Serious eye damage/eye irritation: Category 2

Specific target organ toxicity – single exposure: Category 3 (Respiratory tract irritation)

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

Specific target organ toxicity – repeated exposure: Category 2 (kidneys)

Aspiration hazard: Category 1

ENVIRONMENT HAZARDS

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

Hazardous to the aquatic environment, long-term (chronic): Category 1

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H225 Highly flammable liquid and vapor

H332 Harmful if inhaled

H319 Causes serious eye irritation

H335 May cause respiratory irritation

H336 May cause drowsiness or dizziness

H373 May cause damage to organs through prolonged or repeated exposure (kidneys)

H304 May be fatal if swallowed and enters airways

H410 Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

**Prevention**

- P273 Avoid release to the environment.
- 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.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P264 Wash contaminated parts thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P370 + P378 In case of fire: Use appropriate media to extinguish.
- P391 Collect spillage.
- P314 Get medical advice/attention if you feel unwell.
- P312 Call a POISON CENTER/doctor/physician if you feel unwell.
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice/attention.
- P331 IF SWALLOWED: Do NOT induce vomiting.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.

Disposal

- P501 Dispose of contents/container in accordance with local/national regulation.

Specific adverse human health effects

See "11. Toxicological Information".

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS RN	ENCS	Chemical formula
Methylcyclohexane	≥98	108-87-2	3-2230	CH3C6H11

Note : The figures shown above are not the specifications of the product.

Impurities

Cyclohexane 0.10% (CAS RN 110-82-7)

Section 4. First-aid measures

Descriptions of first-aid measures

**General measures**

Get medical advice/attention if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF INHALED: Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN

Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Do NOT induce vomiting.

Immediately call a POISON CENTER/doctor/physician.

IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Section 5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

In case of fire, use spraying loaded liquid, foam (water-soluble liquid: alcohol-resistant foam), inactive gases, dry powder, dry sand to extinguish.

*Fire Service Act Group 4 Hazardous Materials

Unsuitable extinguishing media

Indoor Fire Plug System or Outdoor Fire Plug System

Sprinkler System

Dry Chemical Extinguishing System-Others (except for phosphates etc., Hydrogen Carbonates etc.)

Fire Extinguisher Discharging Jet Water/Spraying Water

Fire Extinguisher Discharging Jet Loaded Liquid

Fire Extinguisher Discharging Dry Extinguishing agents-Others (except for phosphates etc., Hydrogen Carbonates etc.)

Water Bucket or Water Tank

*Cabinet Order Concerning the Control of Hazardous Materials (Attached Table 5) Group 4 Hazardous Materials

Specific hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

See "10.Stability and Reactivity".

Advice for firefighters**Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with a full facepiece operated



in the positive pressure mode.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for containment and cleaning up

Liquid: Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Solid: Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use non-sparking tools.

Take action to prevent static discharges.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands and contaminated parts thoroughly after handling.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity".

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Storage

Conditions for safe storage

Keep container tightly closed.

Store locked up. (P405)

Store in a cool, dry place. Do not store in direct sunlight.



Storage in accordance with local/national regulation.
Container and packaging materials for safe handling
Use closed unbreakable containers.

Section 8. Exposure controls/personal protection

Control parameters

Administrative Control Levels and Concentration standard value
(Cyclohexane)

Concentration standard value TWA: 100ppm

Occupational Exposure Limit

The Japan Society for Occupational Health

(Methylcyclohexane)

400ppm; 1600mg/m³

(Cyclohexane)

150ppm; 520mg/m³

ACGIH

(Methylcyclohexane)

TWA: 100ppm (Kidney dam)

(Cyclohexane)

TWA: 100ppm (CNS impair; eye & URT irr)

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Recommend to use protective equipment in conformity with the standards.

Use appropriate protective equipment in accordance with local/national regulation.

Respiratory protection

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

Hand protection

Wear impervious protective glove.

Eye protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless, Clear

Odor: Characteristic odor

Melting point/Freezing point: -126.7°C

Boiling point or initial boiling point: (Methylcyclohexane)101°C

Boiling range data is not available.

Flammability data is not available.

Lower and upper explosion limit/flammability limit:



Lower explosion limit: 1.2 vol %

Upper explosion limit: 6.7 vol %

Flash point: (Methylcyclohexane)-6°C

Auto-ignition temperature: (Methylcyclohexane)258°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity: 0.89 mm²/s (25°C)

Solubility:

Solubility in water: None

Solubility in solvent data is not available.

Partition coefficient n-octanol/water data is not available.

Vapor pressure: 5.73kPa (25°C)

Density and/or relative density: 0.8

Relative vapor density (Air=1): 3.4

Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1.1

Particle characteristics data is not available.

Other information

Other information is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

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.

Reacts violently with strong oxidants. This generates fire and explosion hazard. (ICSC 0923)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[NITE-CHRIP]

(Cyclohexane)

rat LD50: 6240 mg/kg (source: NITE)

Acute toxicity (Dermal)

[Data for components of the product]

[NITE-CHRIP]

(Cyclohexane)



rabbit : 2000 mg/kg (no death) (source: NITE)

Acute toxicity (Inhalation)

[Product]

Category 4, Harmful if inhaled

[Data for components of the product]

[NITE-CHRIP]

(Methylcyclohexane)

vapor: mouse LC50: 7500 – 10000 ppm (2-hour) (converted 4-hour equivalent value: 5303 – 7071.1 ppm) (source: NITE)

(Cyclohexane)

vapor: rat LC50: > 9500 ppmV (4-hour) (source: NITE)

Irritant properties

Skin corrosion/irritation

[Data for components of the product]

[NITE-CHRIP]

(Cyclohexane)

Category 2 (source: NITE)

Serious eye damage/irritation

[Product]

Category 2, Causes serious eye irritation

[Data for components of the product]

[NITE-CHRIP]

(Methylcyclohexane)

Category 2B (source: NITE)

(Cyclohexane)

Category 2 (source: NITE)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 3, May cause respiratory irritation

Category 3, May cause drowsiness or dizziness

[Data for components of the product]

[NITE-CHRIP]

(Methylcyclohexane)

Category 3 (Respiratory tract irritation), Category 3 (Narcotic effects) (source: NITE)

(Cyclohexane)

Category 3 (Respiratory tract irritation), Category 3 (Narcotic effects) (source: NITE)

STOT-repeated exposure

[Product]

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[NITE-CHRIP]

(Methylcyclohexane)

Category 2 (kidneys) (source: NITE)

Aspiration hazard

[Product]



Category 1, May be fatal if swallowed and enters airways
[Data for components of the product]
[NITE-CHRIP]
(Methylcyclohexane)
Category 1 (source: NITE)

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]

Category 1, Very toxic to aquatic life

Category 1, Very toxic to aquatic life with long lasting effects

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[NITE-CHRIP]

(Methylcyclohexane)

Crustacea (*Daphnia magna*) 48-hour EC50: 0.33 mg/L (source: NITE)

(Cyclohexane)

Crustacea (*Daphnia magna*) 48-hour EC50: 0.9 mg/L (source: NITE)

Hazardous to the aquatic environment, long-term (chronic)

[NITE-CHRIP]

(Methylcyclohexane)

Algae (*Pseudokirchneriella subcapitata*) 72-hour NOErC: 0.067 mg/L (source: NITE)

(Cyclohexane)

Algae (*Pseudokirchneriella subcapitata*) 72-hour NOEC: 0.94 mg/L (source: NITE)

Water solubility

(Methylcyclohexane)

none (source: ICSC, 1997)

(Cyclohexane)

0.0058 g/100 mL (25°C) (source: ICSC, 2011)

Persistence and degradability

[Data for components of the product]

(Methylcyclohexane)

Not rapidly degradable (Degradation rate: 0% (by BOD)) (source: NITE)

(Cyclohexane)

Rapidly degradable (Degradation rate: 77% (by BOD)) (OECD TG 301F, GLP) (source: NITE)

Bioaccumulative potential

[Data for components of the product]

(Cyclohexane)

log Pow: 3.4 (source: ICSC, 2011)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

**Waste treatment methods**

Avoid release to the environment.

Dispose of contents/container as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

UN Number or ID Number : 2296

UN Proper Shipping Name :

METHYLCYCLOHEXANE

Class or division (Transport hazard class) : 3

Packing group : II

ERG GUIDE No.: 128

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 2296

UN Proper Shipping Name :

METHYLCYCLOHEXANE

Class or division (Transport hazard class) : 3

Packing group : II

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 2296

UN Proper Shipping Name :

METHYLCYCLOHEXANE

Class or division (Transport hazard class) : 3

Hazard labels : Flamm. liquid

Packing group : II

Environmental hazards

Marine pollutants (yes/no) : yes

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Methylcyclohexane; Cyclohexane

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN

IMDG Code, 2024 Edition (Incorporating Amendment 42-24)

IATA Dangerous Goods Regulations (66th Edition) 2025

2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2025 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019



Recommendation of occupational exposure limits (2023–2024) (JSOH)

Supplier's data/information

General Disclaimer

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Unauthorized translation or modification is prohibited.

Please provide SDS to customers for selling or transferring.

All chemicals have unknown hazard. Handle the product with care.

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).