

## Safety Data Sheet

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

**Product identifier:**

Product name: Cyclopentene

Reference number(SDS): 33880jis\_J\_E1-1

**Product type:**

Reagent

**Recommended use of the chemical and restrictions on use**

Recommended uses: Research and Development

Restrictions on uses: Do not use for other purposes.

**Details of the supplier of the safety data sheet**

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

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### Section 2. Hazards identification

**Classification of the substance or mixture****PHYSICAL AND CHEMICAL HAZARDS**

Flammable liquids: Category 2

Self-reactive substances and mixtures: Type G

**HEALTH HAZARDS**

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 4

Acute toxicity (Inhalation): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

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

Aspiration hazard: Category 1

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

**Label elements****Hazard pictograms:**

Signal word: Danger

**Hazard statements**

H225-Highly flammable liquid and vapor

H302-Harmful if swallowed

H312-Harmful in contact with skin

H332-Harmful if inhaled

H315-Causes skin irritation

H319-Causes serious eye irritation

H335-May cause respiratory irritation

H304-May be fatal if swallowed and enters airways

**Precautionary statements****Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Keep container tightly closed.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting equipment.  
Use non-sparking tools.  
Take action to prevent static discharges.  
Avoid breathing vapors.  
Use only outdoors or in a well-ventilated area.  
Wash hands thoroughly after handling.  
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
Wash hands thoroughly after handling. Do not touch eyes.  
Do not eat, drink or smoke when using this product.

**Response**

In case of fire: Use foam, dry powder, CO2 to extinguish.  
Get medical help.  
Get medical help if you feel unwell.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN: Wash with plenty of water.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.  
If skin irritation occurs: Get medical help.  
Take off contaminated clothing and wash it before reuse.  
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 help.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF SWALLOWED: Get emergency medical help immediately.

**Storage**

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

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

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**Section 3. Composition/information on ingredients****Substance/mixture:****Substance**

Ingredient name: Cyclopentene

Content (%): 99.0 <

Chemical formula: C<sub>5</sub>H<sub>8</sub>

ENCS: 3-3439

CAS No.: 142-29-0

MW: 68.12

EC No.: 205-532-9

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

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**Section 4. First aid measures****Descriptions of first aid measures****General measures**

Get medical help.

Keep victim warm and quiet.

Call emergency medical service.

#### IF INHALED

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

Get medical help.

IF INHALED: Get medical help.

#### IF ON SKIN

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.

IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

IF ON SKIN: Wash with plenty of water.

In case of burns, immediately cool affected skin for as long as possible with cold water.

Do not remove clothing if adhering to skin.

Get medical help.

If skin irritation or rash occurs: Get medical help.

Remove and isolate contaminated clothing and shoes.

#### IF IN EYES

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical help.

#### IF SWALLOWED

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF SWALLOWED: Get emergency medical help immediately.

Most important symptoms and effects, both acute and delayed

Specific information on symptom and effect are unknown.

Indication of any immediate medical attention and special treatment needed

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Specific treatment.

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## Section 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

In case of fire, use foam, dry powder, CO<sub>2</sub> to extinguish.

Use of water spray when fighting fire may be inefficient.

#### Unsuitable extinguishing media

Do not use direct water jet.

### Specific hazards arising from the substance or mixture

Containers may explode when heated.

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

Runoff from fire control or dilution water may cause pollution.

### Advice for firefighters

#### Special extinguishing method

Evacuate non-essential personnel to safe area.

Cool container with water spray.

#### 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.

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## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- Keep unauthorized personnel away.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ventilate area until material pick up is complete.
- Wear proper protective equipment.
- PUBLIC SAFETY: Ventilate closed spaces before entering.
- Do not touch or walk through spilled material.

### Environmental precautions

- Runoff to sewer may create fire or explosion hazard.
- Vapor explosion hazard indoors, outdoors or in sewers.
- Avoid release to headsprings, rivers, lakes, ocean and groundwater.

### Methods and materials for containment and cleaning up

- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.
- All equipment used when handling the product must be grounded.

### Preventive measures for secondary accident

- Collect spillage.
- Stop leak if you can do it without risk.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Prevent entry into waterways, sewers, basements or confined areas.
- Keep out of low areas.

### Reference to other sections

- Refer to section 8
- Refer to section 13

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## Section 7. Handling and storage

### Engineering measures

- (Measures to prevent operator exposure)
  - Avoid breathing vapors.
- (Measures to prevent 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.
- (Local ventilation/general ventilation)
  - Exhaust/ventilator should be available.
- (Precautions)
  - Avoid contact with skin.
  - Avoid contact with eyes.

### Advice on safe handling

- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- Use personal protective equipment as required.
- When using do not eat, drink or smoke.

### Avoidance of contact

- See Section 10: Stability and Reactivity.

### Advice on general occupational hygiene

- Do not get in eyes, on skin, or on clothing.
- Wash hands thoroughly after handling. Do not touch eyes.

Do not eat, drink or smoke when using this product.  
Take off contaminated clothing and wash it before reuse.

Conditions for safe storage

Keep container tightly closed.  
Keep cool.  
Store in accordance with local/regional/national/international regulations.  
Store locked up.  
Protect from sunlight. Store in a well-ventilated place.

Incompatible substances

Refer to Section 10. Stability and reactivity.

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See  
Section 8 for exposure controls and personal protection recommendations.

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## Section 8. Exposure controls/personal protection

Permissible concentration

Control value and Concentration standard value under ISHA

Not established

Occupational exposure limit values

JSOH

Not established

ACGIH

Not established

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, such as personal protective equipment

Respiratory protection

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

Hand protection

Wear protective gloves. Recommended material(s): viton  
Inspect before use and replace worn or damaged gloves.  
Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.  
Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

Eye/face protection

Wear safety glasses with side-shields.  
Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.  
Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

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## Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor: Odorless~Characteristic odor

Odor threshold data is not available.  
Melting point/Freezing point:  $-135^{\circ}\text{C}$   
Boiling point or initial boiling point and boiling range:  $44^{\circ}\text{C}$   
Flammability: Ignitable  
Lower and upper explosion limit:  
    Lower explosion limit: 1.5vol %  
Flash point:  $-29^{\circ}\text{C}$   
Auto-ignition temperature:  $309^{\circ}\text{C}$   
Decomposition temperature data is not available.  
pH data is not available.  
Dynamic viscosity:  $0.233\text{mPa}\cdot\text{s}(20^{\circ}\text{C})$   
Kinematic viscosity:  $0.30\text{mm}^2/\text{s}(20^{\circ}\text{C})$   
Solubility:  
    Solubility in water:  $0.535\text{g/liter}(25^{\circ}\text{C})$   
    Solubility in solvent: Soluble in hydrocarbons.  
Partition coefficient n-octanol/water data is not available.  
Vapor pressure:  $416\text{hPa}(20^{\circ}\text{C})$   
Density and/or relative density:  $0.770\sim 0.775(20/20^{\circ}\text{C})$   
Relative vapor density (Air=1): 2.34  
Relative density of the Vapor/air – mixture at  $20^{\circ}\text{C}$  (Air = 1): 1.55  
Particle characteristics data is not available.

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## Section 10. Stability and Reactivity

### Reactivity

Reactivity data is not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

Vapours may form hazardous explosive mixtures with air.

### Conditions to avoid

Avoid direct sunlight, fire, flame, high temperature.

Contact with incompatible materials.

Air.

### Incompatible materials

Acids, Oxidizing agents

### Hazardous decomposition products

Carbon oxides

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## Section 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[Product]

Category 4, Harmful if swallowed

[Data for components of the product]

[NITE-CHIRP]

male rat LD50:  $1650\text{ mg/kg}$  (source: NITE)

##### Acute toxicity (Dermal)

[Product]

Category 4, Harmful in contact with skin

[Data for components of the product]

[NITE-CHRIP]

male rabbit LD50: 1230 mg/kg (source: NITE)

Acute toxicity (Inhalation)

[Product]

Category 4, Harmful if inhaled

[Data for components of the product]

[NITE-CHRIP]

vapor: rat LC50: > 8100 ppm (4-hour) (source: NITE)

vapor: rat LC50: < 16000 ppm (4-hour) (source: NITE)

Skin corrosion/irritation

[Product]

Category 2, Causes skin irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2 (source: NITE)

Serious eye damage/irritation

[Product]

Category 2, Causes serious eye irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2 (source: NITE)

Respiratory or skin sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Carcinogenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Reproductive toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Specific target organ toxicity – single exposure

[Product]

Category 3, May cause respiratory irritation

[Data for components of the product]

[NITE-CHRIP]

Category 3 (Respiratory tract irritation) (source: NITE)

## Specific target organ toxicity – repeated exposure

## [Product]

Classification not possible (Insufficient data available or no data available).

## [Data for components of the product]

No data available.

## Aspiration hazard

## [Product]

Category 1, May be fatal if swallowed and enters airways

## [Data for components of the product]

## [NITE–CHRIP]

Category 1 (source: NITE)

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Section 12. Ecological Information

## Ecotoxicity

## Aquatic toxicity

## [Product]

Classification not possible (Insufficient data available or no data available).

## [Data for components of the product]

No data available.

## Persistence and degradability

Persistence and degradability data is not available.

## Bioaccumulative potential

Bioaccumulative potential data is not available.

## Mobility in soil

Mobility in soil data is not available.

## Other adverse effects

Ozone depleting chemical data is not available.

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Section 13. Disposal considerations

## Waste treatment methods

## Waste from residues

Disposal should be in accordance with local, national, and international laws and regulations.

Comply with relevant laws and regulations as well as local municipal standards.

Do not dump into sewers, on the ground or into any body of water.

## Contaminated packing

Disposal should be in accordance with local, national, and international laws and regulations.

Comply with relevant laws and regulations as well as local municipal standards.

Dispose of container after using the contents completely.

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Section 14. Transport Information

## UNRTDG

UN number : UN2246

UN Proper Shipping Name : CYCLOPENTENE

Transport hazard class(es) : 3

Packing group : II

## IMDG Code (International Maritime Dangerous Goods Regulations)

UN number : UN2246

UN Proper Shipping Name : CYCLOPENTENE

Transport hazard class(es) : 3

Packing group : II



## IATA (Dangerous Goods Regulations)

UN number : UN2246

UN Proper Shipping Name : CYCLOPENTENE

Transport hazard class(es) : 3

Hazard labels : Flamm. liquid

Packing group : II

Marine pollutants (yes/no) : no

Special precautions for user

No information available.

Maritime transport in bulk according to IMO instruments

MARPOL Annex II – Noxious Liquid Substances

Noxious Liquid Substances ; Cat. Y

Cyclopentene

ERG GUIDE No.: 128

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Section 15. Regulatory Information

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

Chemicals listed in TSCA Inventory

142-29-0

All components are listed or exempted.

## Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

## Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

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Section 16. Other information

## GHS classification and labelling

H225-Flammable liquids, Category 2: H225 Highly flammable liquid and vapor

Self-Reactive Substances and Mixtures, Type G

H302-Acute toxicity, Category 4: H302 Harmful if swallowed

H312-Acute toxicity, Category 4: H312 Harmful in contact with skin

H332-Acute toxicity, Category 4: H332 Harmful if inhaled

H315-Skin corrosion/irritation, Category 2: H315 Causes skin irritation

H319-Serious eye damage/eye irritation, Category 2: H319 Causes serious eye irritation

H335-Specific target organ toxicity – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation

H304-Aspiration hazard, Category 1: H304 May be fatal if swallowed and enters airways

## 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 (67th Edition) 2026

2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2026 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2025

JIS Z 7253 : 2025

Recommendation of occupational exposure limits (2024–2025) (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, MHLW in Japan

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.39 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

([https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/systemTop))

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

#### Abbreviations and acronyms

ACGIH – American Conference of Governmental Industrial Hygienists;

anh – anhydride;

ATE – Acute Toxicity Estimate;

BCF – Bioconcentration Factor;

BOD – Biochemical Oxygen Demand;

Cat. – Category;

Ceiling-C – Ceiling value;

COD – Chemical Oxygen Demand;

CSCL – Chemical Substances Control Law in Japan;

DSEN – Dermal Sensitization;

EC No. – The European Community number;

EC50 – Effective Concentration 50;

ENCS – Existing and New Chemical Substances Inventory under CSCL

EPA – US Environmental Protection Agency;

EU – European Union;

GHS – Globally Harmonized System of Classification and Labelling of Chemicals;

IARC – International Agency for Research on Cancer;

IATA – International Air Transport Association;

IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk;

IMDG Code – International Maritime Dangerous Goods Code;

ISHA – Industrial Safety and Health Act in Japan;

JSOH – Japan Society for Occupational Health;

LC50 – Lethal Concentration 50;

LD50 – Lethal Dose 50;

logPow – n-Octanol/water Partition Coefficient;

MARPOL – International Convention for the Prevention of Pollution from Ships;

METI – Ministry of Economy, Trade and Industry in Japan;

MHLW – Ministry of Health, Labour and Welfare in Japan;

MOE – Ministry of the Environment in Japan

NOEC – No Observed Effect Concentration;

NTP – US National Toxicology Program;

REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No.1907/2006;

RSEN – Respiratory Sensitization;

Skin – Danger of cutaneous absorption;

STEL – Short-term Exposure Limit;

STOT – Specific target organ toxicity;

SVHC – Substance of Very High Concern under REACH;

TWA – time-weighted average;

UN – United Nations;

UNRTDG – United Nations Recommendations on the Transport of Dangerous Goods;

**General Disclaimer**

The information relates to this specific material. It may not be valid for this material, if used in combination with any other materials or in any process. It is the user's responsibility to satisfy him-selves as to the suitability and completeness of this information for his own particular use.

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).