



## Safety Data Sheet

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

#### Product identifier:

Product name: 2,2,6,6-Tetramethylpiperidine 1-oxyl, Free Radical

Product code(SDS NO): 7805E-1

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka 540-0029, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Skin corrosion/irritation: Category 1B

Serious eye damage/eye irritation: Category 1

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Causes severe skin burns and eye damage

Causes serious eye damage

#### PRECAUTIONARY STATEMENT

##### Prevention

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

##### Response

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

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

Wash contaminated clothing before reuse.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

##### Disposal

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



### 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Substance

Ingredient name: 2,2,6,6-Tetramethylpiperidine 1-oxyl, Free Radical

Content(%): 98(min)

Chemical formula: C<sub>9</sub>H<sub>18</sub>NO

CAS No.: 2564-83-2

MW: 156.25

ECNO: 219-888-8

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

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### 4. First-aid measures

#### Descriptions of first-aid measures

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

##### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/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.

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

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### 5. Fire-fighting measures

#### Extinguishing media

##### Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

#### Specific hazards arising from the substance or mixture

Containers may explode when heated.

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

#### Advice for firefighters

##### Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

##### Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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### 6. Accidental release measures

#### Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

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

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

#### Preventive measures for secondary accident



Collect spillage.

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## 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/sparks/open flames/hot surfaces. – No smoking.

#### Exhaust/ventilator

Exhaust/ventilator should be available.

#### Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

### Conditions for safe storage, including any incompatibilities

#### Recommendation for storage

Keep container tightly closed.

chilled storage.

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## 8. Exposure controls/personal protection

### 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

##### Respiratory protection

Wear respiratory protection.

##### Hand protection

Wear protective gloves.

##### Eye protection

Wear eye/face protection.

#### Safety and Health measures

Wash thoroughly after handling.

Wash contaminated clothing before reuse.

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## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

#### Physical properties

Appearance: Crystals or crystalline powder

Color: Yellow-red

Odor data N.A.

#### Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point: 39°C

Decomposition temperature data N.A.

Flash point: (2,2,6,6-Tetramethylpiperidine 1-oxyl, Free Radical) 67°C



Auto-ignition temperature data N.A.  
Explosive properties data N.A.  
Vapor pressure data N.A.  
Vapor density data N.A.  
Specific gravity/Density data N.A.  
n-Octanol / water partition coefficient data N.A.

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## 10. Stability and Reactivity

### Chemical stability

Stable under normal storage/handling conditions.

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Strong acids, Oxidizing agents

### Hazardous decomposition products

Carbon oxides, Nitrogen oxides

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## 11. Toxicological Information

### Information on toxicological effects

No Acute toxicity data available

### Irritant properties

#### Skin corrosion/irritation

[Company proprietary data]

(2,2,6,6-Tetramethylpiperidine 1-oxyl, Free Radical)

rabbit-skin 500mg/4H SEV

#### Serious eye damage /irritation

[Company proprietary data]

(2,2,6,6-Tetramethylpiperidine 1-oxyl, Free Radical)

rabbit-eye 100mg/24H SEV

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

No Teratogenic effects data available

No reproductive toxicity data available

No STOT-single/repeated exposure data available

No Aspiration hazard data available

### Additional data

May cause lung disorders by massive inhalation of powdered substance.

-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

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## 12. Ecological Information

### Ecotoxicity

No Aquatic toxicity data available

No Persistence and degradability data available

No Bioaccumulative potential data available

No Mobility in soil data available

Ozone depleting chemical data not available

**13. Disposal considerations**

## Waste treatment methods

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

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**14. Transport Information**

UN number: 3263

UN proper shipping name:

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

Transport hazard class(es): 8

Packing group: II

ERG GUIDE NO.: 154

Special provisions NO.: 274; A3; A803

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**15. Regulatory Information**

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

US major regulations

TSCA

2,2,6,6-Tetramethylpiperidine 1-oxyl, Free Radical

Other regulatory information

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

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**16. Other information**

## GHS classification and labelling

Skin Corr. 1B: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

## Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2017 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

Hazard Communication Standard – 2012

## General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

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 Japan official data (NITE published in 2016).