



## Safety Data Sheet

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

**Product identifier:**

Product name: 1,2,3,4-Tetrahydronaphthalene  
SDS No. : 7693E-2

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

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.  
Address: 3-1, Honmachibashi, Chuo-ku, Osaka, 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****PHYSICAL AND CHEMICAL HAZARDS**

Flammable liquids: Category 4

**HEALTH HAZARDS**

Acute toxicity (Inhalation): Category 2

Skin corrosion/irritation: Category 2

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

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

**ENVIRONMENT HAZARDS**

Hazardous to the aquatic environment (Acute): Category 2

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

**Label elements**

Signal word: Danger

**HAZARD STATEMENT**

Combustible liquid

Fatal if inhaled

Causes skin irritation

May cause drowsiness or dizziness

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

Toxic to aquatic life

**PRECAUTIONARY STATEMENT****Prevention**

Avoid release to the environment.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

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

In case of inadequate ventilation wear respiratory protection. (as specified by the manufacturer/supplier or the competent authority.)

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

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

**Response**

- In case of fire: Use appropriate media other than water for extinction.
- Get medical advice/attention if you feel unwell.
- Call a POISON CENTER or doctor/physician if you feel unwell.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation occurs: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.

**Storage**

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

**Disposal**

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

**Specific Physical and Chemical hazards**

- Heating may cause fire.

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**3. Composition/information on ingredients****Mixture/Substance selection:****Substance**

Ingredient name:1,2,3,4-Tetrahydronaphthalene

Content (%):98(min)

Chemical formula:C10H12

Chemicals No, Japan:4-574

CAS No.:119-64-2

MW:132.21

ECNO:204-340-2

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****General measures**

- Get medical attention/advice if you feel unwell.

**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.
- Wash with plenty of soap and water.
- 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.
- Call a POISON CENTER or doctor/physician if you feel unwell.



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## 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

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

#### Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

Dry-powder firefighting equipment – except for phosphate etc.,hydrogen carbonate etc.

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

Dry-powder extinguisher – except for phosphate etc.,hydrogen carbonate etc.

Bucket of water or tank of water

### 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 until material pick up is complete.

Wear proper protective equipment.

### Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

### Methods and materials for containment and cleaning up

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

### 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

Use only outdoors or in a well-ventilated area.



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

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.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

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

Container and packaging materials for safe handling

Glass

Iron

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## 8. Exposure controls/personal protection

Control parameters

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.

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## 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: -35.8°C

Boiling point or initial boiling point: (1,2,3,4-Tetrahydronaphthalene)207.6°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 0.8 vol % (100°C)

Upper explosion limit: 5.0 vol % (150°C)

Flash point: (1,2,3,4-Tetrahydronaphthalene)(O.C.) 77°C

Auto-ignition temperature: (1,2,3,4-Tetrahydronaphthalene)385°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Very poor

n-Octanol/water partition coefficient: log Pow3.78

Vapor pressure: 0.05 kPa (25°C)

Density and/or relative density: 0.97



Relative vapor density (Air=1): 4.6  
No Particle characteristics data is not available.

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## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

As a result of flow, agitation, etc., electrostatic charges can be generated.

The substance can form explosive peroxides. Decomposes on heating. This produces irritating fumes. Reacts vigorously with oxidants. (ICSC 1527)

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Oxidizing agents

### Hazardous decomposition products

Carbon oxides, Explosive peroxides

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(1,2,3,4-Tetrahydronaphthalene)

vapor: guinea pig LC50=389ppm/4hr (PATTY, 2000)

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

(1,2,3,4-Tetrahydronaphthalene)

rabbit moderate (SIDS, 2008)

Serious eye damage/irritation data is not available.

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.

#### STOT

##### STOT-single exposure

[cat.3 (drow./dizz.)]

[GHS Cat. Japan, base data]

(1,2,3,4-Tetrahydronaphthalene)

narcotic effect (SIDS, 2008)

##### STOT-repeated exposure

[cat.2]

[GHS Cat. Japan, base data]

(1,2,3,4-Tetrahydronaphthalene)

blood (SIDS, 2008)

Aspiration hazard data is not available.



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**12. Ecological Information**

## Ecotoxicity

## Aquatic toxicity

Toxic to aquatic life

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(1,2,3,4-Tetrahydronaphthalene)

Fish (Danio rerio) LC50=3.2mg/L/96hr (SIDS, 2008)

## Water solubility

(1,2,3,4-Tetrahydronaphthalene)

very poor (ICSC, 2004)

## Persistence and degradability

(1,2,3,4-Tetrahydronaphthalene)

BOD\_Degradation : 81% (SIDS, 2006)

## Bioaccumulative potential

(1,2,3,4-Tetrahydronaphthalene)

log Pow=3.78 (ICSC, 2004)

## Mobility in soil

Mobility in soil data is not available.

## Other adverse effects

Ozone depleting chemical data is not available.

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**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 (- if this is not the intended use).

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

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**14. Transport Information**

UN No. or ID No.: Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

## Environmental hazards

MARPOL Annex III - Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Y

1,2,3,4-Tetrahydronaphthalene

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**15. Regulatory Information**

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

Chemicals listed in TSCA Inventory

1,2,3,4-Tetrahydronaphthalene

## 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**

Flam. Liq. 4: H227 Combustible liquid

Acute Tox. 2: H330 Fatal if inhaled

Skin Irrit. 2: H315 Causes skin irritation

STOT SE 3: H336 May cause drowsiness or dizziness

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure

Aquatic Acute 2: H401 Toxic to aquatic life

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (61th Edition) 2020

Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

**General Disclaimer**

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 Japan official data (NITE published in 2019).