



Safety Data Sheet

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

Product identifier:

Product name: Cyclopentyl methyl ether

SDS No. : 4853E-1

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 2

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Harmful if swallowed

Causes skin irritation

Causes serious eye irritation

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT**Prevention**

Avoid release to the environment.

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

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash contaminated parts thoroughly after handling.



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

Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media other than water for extinction.

IF ON SKIN: Wash with plenty of soap and water.

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

If skin irritation occurs: Get medical advice/attention.

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 advice/attention.

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

IF SWALLOWED: Rinse mouth.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

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

Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Cyclopentyl methyl ether

Content (%):98(min)

Chemical formula:C6H12O

Chemicals No, Japan:3-4548

CAS No.:5614-37-9

MW:100.16

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

Impurities and stabilizing additives

Stabilizer: Dibutyl hydroxytoluene (CAS No.128-37-0)

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.

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.



5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use foam, dry powder, CO₂ 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.

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.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Protective measures against fire and explosion)

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

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

**Safety Measures**

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.

Do not eat, drink or smoke when using this product.

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

8. Exposure controls/personal protection**Control parameters****Adopted value**

(Dibutyl hydroxytoluene)

ACGIH(2001) TWA: 2mg/m³(IFV) (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**Respiratory protection**

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state: Liquid

Color: Colorless

Odor: Characteristic odor

pH data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Melting point/Freezing point: <-140°C

Decomposition temperature data is not available.

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

Flash point: (Cyclopentyl methyl ether)-1°C

Auto-ignition temperature data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Vapor pressure data is not available.

Relative vapor density (Air=1) data is not available.

Density and/or relative density: 0.86



Kinematic viscosity data is not available.

Solubility:

Solubility in water: Insoluble

n-Octanol/water partition coefficient data is not available.

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Not available.

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

rat LD50=2450mg/kg (DFGOT vol.23, 2007)

[Company proprietary data]

(Cyclopentyl methyl ether)

rat LD50=1000-2000mg/kg

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

rat LD50 >2000mg/kg (SIDS, 2002)

[Company proprietary data]

(Cyclopentyl methyl ether)

rat LD50>2000mg/kg

Acute toxicity (Inhalation)

[Company proprietary data]

(Cyclopentyl methyl ether)

rat(vapor) LC50>21.5mg/L

Irritant properties

Skin corrosion/irritation

[Company proprietary data]

(Cyclopentyl methyl ether)

Category 2

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

rabbit recover after 72hours (SIDS, 2002)

[Company proprietary data]



(Cyclopentyl methyl ether)

Category 2

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

(Dibutyl hydroxytoluene)

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

(Dibutyl hydroxytoluene)

ACGIH-A4(2001) : Not Classifiable as a Human Carcinogen

Reproductive toxicity data is not available.

STOT

STOT-single exposure data is not available.

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

Crustacea (Daphnia magna) EC50=0.84mg/L/48hr (MOE Japan, 1999)

[Company proprietary data]

(Cyclopentyl methyl ether)

Crustacea(Daphnia) EC50=35mg/L/48hr

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

(Dibutyl hydroxytoluene)

Fish (Atheriniformes) ELS NOEC=0.053mg/L (MOE Japan, 2007)

[Company proprietary data]

(Cyclopentyl methyl ether)

Category 3

Water solubility

(Dibutyl hydroxytoluene)

0.00006 g/100 ml (25°C) (ICSC, 1999)

Persistence and degradability

(Dibutyl hydroxytoluene)

Not degrade rapidly (BOD_Degradation : 4.5% (Registered chemicals data check & review 1979)

Bioaccumulative potential

(Dibutyl hydroxytoluene)

log Pow=5.1 (ICSC, 1999); BCF=2800 (Check & Review, Japan)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.



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.

14. Transport Information

UN No.: 3271

Proper Shipping Name :

ETHERS, N.O.S.

Class or division : 3

Packing group : II

ERG GUIDE No.: 127

Special provisions No.: 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 3271

Proper Shipping Name :

ETHERS, N.O.S.

Class or division : 3

Packing group : II

Special provisions No.: 274

IATA Dangerous Goods Regulations

UN No.: 3271

Proper Shipping Name :

ETHERS, N.O.S.

Class or division : 3

Hazard labels : Flamm.liquid

Packing group : II

Special provisions No.: A3

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

15. Regulatory Information

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

US major regulations

Chemicals listed in TSCA Inventory

Dibutyl hydroxytoluene; Cyclopentyl methyl ether

Other regulatory information

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

16. Other information

GHS classification and labelling

Flam. Liq. 2: H225 Highly flammable liquid and vapor

Acute Tox. 4: H302 Harmful if swallowed

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2: H319 Causes serious eye irritation

Aquatic Acute 3: H402 Harmful to aquatic life



Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 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 2018).