

Safety Data Sheet

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

Product identifier:

Product name: Dimethyl malonate

Product code(SDS NO): 70170jis_E1-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

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

Division: Quality Assurance Department

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids: Category 4

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2A

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 3

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

Label elements



Signal word: Warning

HAZARD STATEMENT

Combustible liquid

Causes serious eye irritation

Harmful to aquatic life

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves and face protection.

Wear eye protection/face protection.

Response

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

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.

Storage

Store in a well-ventilated place. Keep cool.

Disposal

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

Physical and Chemical hazards
Heating may cause fire.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Common name, synonyms: Methyl malonate

Ingredient name: Dimethyl malonate

Content(%): 98.0 <

Chemical formula: C₅H₈O₄

Chemicals No, Japan: 2-913

CAS No.: 108-59-8

MW: 132.12

ECNO: 203-597-8

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.

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 water mist, foam, dry powder, CO₂, dry sand.

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.

Cool container with water spray.

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 after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the rivers, lakes, ocean and groundwater.

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 & 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.

Avoid breathing dust, fume, gas, mist or vapor.

Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

Wear protective gloves and face protection.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

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

Keep cool. Protect from sunlight.

8. Exposure controls/personal protection

Control parameters

No control value data available

Adopted value

No Adopted value data available

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. Recommended material(s): butyl rubber

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Colorless

Odor: Aromatic odor

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point: 181.4°C

Melting point/Freezing point: -61.9°C

Decomposition temperature data N.A.

Flash point: (c.c.)90°C

Auto-ignition temperature: 440°C

Explosive properties: Flammability or explosive limit

lower limit: 1.32vol %

upper limit: 17.4vol %

Vapor pressure: 0.15hPa(20°C)

Relative density of the Vapor/air-mixture at 20°C (Air = 1): 1.00

Specific gravity/Density: 1.151~1.158g/ml(20°C)

Solubility

Solubility in water: 99g/liter(20°C)

n-Octanol /water partition coefficient: log Pow=0.05

10. Stability and Reactivity**Chemical stability**

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

rat LD50 >2000mg/kg(SIDS, 2006)

Acute toxicity (Dermal)

rat LD50 >2000mg/kg(SIDS, 2006)

Irritant properties

Skin corrosion/irritation

rabbit : not irritating (SIDS, 2006)

Serious eye damage /irritation

rabbit : mild~moderate irritating (SIDS, 2006)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

No reproductive toxicity data available

No STOT-single/repeated exposure data available

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Harmful to aquatic life

Aquatic acute toxicity component(s) data

Fish (Danio rerio) LC50 = 21 mg/L/96hr (SIDS, 2006)

Water solubility

99 g/L(20°C)(SIDS, 2006)

No Persistence and degradability data available

Bioaccumulative potential

log Pow= -0.05(SIDS, 2006)

13. Disposal considerations

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, UN CLASS

Not applicable to UN NO.

15. Regulatory Information

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

US major regulations

TSCA

Dimethyl malonate

Other regulatory information

We are not able to check up the regulatory information in 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.

16. Other information

GHS classification and labelling

Flam. Liq. 4: H227 Combustible liquid

Eye Irrit. 2A: H319 Causes serious eye irritation

Aquatic Acute 3: H402 Harmful to aquatic life

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 (table3-1 ECNO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2017 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) <http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013, METI)

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 are advised to make their own tests to determinate 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 2015).