

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- a. Product name : Rheopearl MKL2
Product code : H164
- b. Information on manufacturer/supplier/distributor
Company name : Chiba Flour Milling Co., Ltd.
Address : 17 Shinminato, Mihama-ku, Chiba, Japan
Phone number : +81-43-241-0111
Emergency phone : +81-43-241-0111
number
E-mail address : kikaku@chiba-seifun.co.jp
- c. Recommended use of the chemical and restrictions on use
: Pharmaceutical additive, raw material for quasi-pharmaceutical products, cosmetics and other chemicals

SECTION 2: Hazards identification

- a. GHS Classification (The guidance of GHS classification (Mar. 2015) for industries is used.)
: Not a hazardous substance.
- b. Label elements : Not a hazardous substance.
- c. Other hazards : Designated flammable goods
(Fire and Disaster Management Act. Article 9 paragraph 4 in JAPAN)

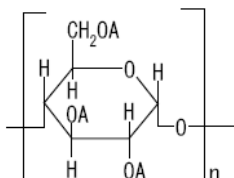
SECTION 3: Composition/information on ingredients

Chemical substance

Chemical name or common name : Dextrin myristate

Synonym : Dextrin, tetradecanoate

Chemical properties (Rational formula or chemical structure):



A : Myristoyl group or hydrogen, n : Degree of polymerization

CAS No. : 93792-77-9

Serial no. of government
gazette (A • B) : (8)-126

(A) The Law concerning Examination and Regulation of Manufacture, etc. of Chemical Substances

Product Name: Rheopearl MKL2

(B) Industrial Safety and Health Law

Impurities and stabilizing additives : None
contributed to classification

Content or content range : 95% or more

Impurities contained less than : Methanol < 5ppm (Detection Limit. Internal test.)
the lower concentration limit of : Dimethylformamide < 5ppm (Detection Limit. Internal test.)
mixture as per GHS classification : β -Picoline < 300ppm

Impurities not contributed : Myristic acid 5% or less
to classification

SECTION 4: First aid measures

a. Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : No special precautions are necessary for first aid responders.

If inhaled : Immediately remove victim to fresh air.
If not breathing, if breathing is weak, loosen clothing and maintain a open airway and then, give artificial respiration.
Get medical attention if symptoms occur

If case of skin contact : Wash with water and soap.
Get medical attention if symptoms occur.

If case of eye contact : If in eyes, rinse well with water.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur
Rinse mouth thoroughly with water.

b. Most important symptoms and effects, both acute and delayed

Risks :Contact with dust can cause mechanical irritation or drying of the skin.
Dust contact with the eyes can lead to mechanical irritation.

c. Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

a. Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : High volume water jet.

b. Special hazards arising from the substance or mixture

Specific hazards during firefighting :Do not use a solid water stream as it may scatter and spread fire.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides

c. Advice for firefighters

Special protective equipment for firefighters :Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Specific extinguishing methods :Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

- a. Personal precautions, protective equipment and emergency procedures
Personal precautions :Follow safe handling advice and personal protective equipment recommendations.
 - b. Environmental precautions
Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
 - c. Methods and material for containment and cleaning up
Methods for cleaning up :Sweep up or vacuum up spillage and collect in suitable container for disposal.
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
 - d. Reference to other sections
See sections: 7, 8, 11, 12 and 13.
-

SECTION 7: Handling and storage

- a. Precautions for safe handling
Technical measures :Static electricity may accumulate and ignite suspended dust causing an explosion.
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Local/Total ventilation : Use only with adequate ventilation.
Advice on safe handling : Do not breathe dust.
Handle in accordance with good industrial hygiene and safety practice.
Minimize dust generation and accumulation.
Keep container closed when not in use.
Keep away from heat and sources of ignition.
Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures :Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.
- b. Storage:

Product Name: Rheopearl MKL2

| | |
|---|---|
| Technical measures | : Avoid fire, sources of heat. |
| Requirements for storage areas and containers | : Keep in properly labelled containers. Store in accordance with the particular national regulations. |
| Advice on common storage | : Do not store with the following product types: Strong oxidizing agents |
| Storage condition | : Store in a cool and dark area, away from direct sunlight, high temperature and high humidity. |
| Container and packaging material: Recommend to keep container unopened. | |

SECTION 8: Exposure controls/personal protection

a. Control parameters

Contains no substances with occupational exposure limit values.

b. Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Apply measures to prevent dust explosions.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal protective equipment:

Eye protection : Wear the following personal protective equipment:
Safety goggles

Hand protection

Material : Rubber gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Skin should be washed after contact.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Particulates type (P)

SECTION 9: Physical and chemical properties

a. Information on basic physical and chemical properties

| | |
|---|------------------------------|
| Appearance | : Powder or particles |
| Colour | : White to pale yellow |
| Odour | : Odorless or characteristic |
| Odour Threshold | : No data available |
| pH | : No data available |
| Melting point/freezing point | : 50 - 150 °C |
| Initial boiling point and boiling range | : No data available |
| Flash point | : >200 °C |

Product Name: Rheopearl MKL2

| | |
|--|--|
| Evaporation rate | : Not applicable |
| Flammability (solid, gas) | : Not classified as a flammability hazard |
| Upper explosion limit | : No data available |
| Lower explosion limit | : No data available |
| Vapour pressure | : Not applicable |
| Relative vapour density | : Not applicable |
| Relative density | : No data available |
| Solubility(ies) | |
| Water solubility | : insoluble |
| Solubility in other solvents | : soluble Solvent: Benzene soluble Solvent: Xylene soluble Solvent: Chloroform soluble Solvent: carbon tetrachloride insoluble Solvent: Methanol insoluble Solvent: Ethanol |
| Partition coefficient n-octanol/water | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | |
| Viscosity, dynamic | : Not applicable |
| Explosive properties | : Not explosive |
| Oxidizing properties | : The substance or mixture is not classified as oxidizing. |
| b. Other information | |
| Burning calories | :35.4 kJ/g |

SECTION 10: Stability and reactivity

- a. Reactivity
Not classified as a reactivity hazard.
- b. Chemical stability
Stable under normal conditions.
- c. Possibility of hazardous reactions
Hazardous reactions : Dust can form an explosive mixture in air.
Can react with strong oxidizing agents.
- d. Conditions to avoid
Conditions to avoid : None known.
- e. Incompatible materials
Materials to avoid : Oxidizing agents

- f. Hazardous decomposition products
No hazardous decomposition products are known.
-

SECTION 11: Toxicological information

- a. Acute toxicity:
- Oral : Based on no mortality after oral dose of 2000 mg/kg in rats. However, we do not have a toxicity data of 5000 mg/kg in rats. It is considered as 'Classification not possible'. ※ 1
- Dermal : Based on no mortality after dermal administration of 2000 mg/kg in rats using an occlusive dressing technique. However, we do not have a toxicity data of 5000 mg/kg in rats. It is considered as 'Classification not possible'. ※ 1
- Inhalation:
- Inhalation (gas) : No data
 - Inhalation (vapor) : No data.
 - Inhalation (mist) : No data.
- b. Skin corrosion/irritation:
There is a skin irritation test result of "No irritation" in 3 New Zealand white rabbits, but it is not enough to be classified. ※ 1
- c. Serious eye damage/eye irritation:
- d. • Based on the eye irritation test result of "No irritation" in 6 New Zealand white rabbits, it is considered as 'Not classified'. ※ 1
- e. Respiratory sensitization : No data.
- f. Skin sensitization:
There was no positive results in test group and was a positive result in control group of Magnusson-Kligman Maximization test in guinea pig. Based on the test results, there is no evidence showing the material is sensitizing in guinea-pig. ※ 1
- g. Germ cell mutagenicity:
Since there is no in vivo test data, it cannot be classified only using the negative result of in-vitro mutagenicity test (*Salmonella typhimurium*). ※ 1
- h. Carcinogenicity : No data.
- i. Reproductive toxicity : No data.
- j. Specific target organ toxicity (single exposure): No data.
- k. Specific target organ toxicity (repeated exposure): No data.
- l. Aspiration hazard : No data.

※ 1 : Based on internal data of Chiba Flour Milling Co., Ltd. (Test results on safety conducted by Inveresk Research), the information on 'Dextrin myristate', product name 'Rheopearl MKL' which has same CAS No. is mentioned.

SECTION 12: Ecological information

- a. Hazards to aquatic environment- acute hazard : No data.
- b. Hazards to aquatic environment- chronic hazard : No data.
-

SECTION 13: Disposal considerations

- a. Waste treatment methods
- Product : Dispose of in accordance with local regulations.

Product Name: Rheopearl MKL2

| | |
|------------------------|--|
| Contaminated packaging | According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. : Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product. |
|------------------------|--|

SECTION 14: Transport information

- a. UN number
Not regulated as a dangerous good
- b. UN proper shipping name
Not regulated as a dangerous good
- c. Transport hazard class(es)
Not regulated as a dangerous good:
- d. Packing group
Not regulated as a dangerous good
- e. Environmental hazards
Not regulated as a dangerous good
- f. Special precautions for user
Not applicable
- g. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

Fire and Disaster Management Act. Article 9 paragraph 4 in JAPAN:
Designated combustible material (Combustible solids: 3,000 kg)

SECTION 16: Other Information

Reference:

Internal data of Chiba Flour Milling Co., Ltd. (Test results on safety conducted by Inveresk Research)

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.