

SAFETY DATA SHEET**1. IDENTIFICATION**

Product name: Calcium carbonate

CAS No. : 471-34-1

Brand: Macklin

Company: Shanghai Macklin Biochemical Co.,Ltd.

Address: Shanghai Pudong Zhangjiang High-tech Park; 10th Building, 5F, 88 Darwin Road; SHANGHAI CHINA

Zip code: 201206

Telephone: +86 21-51328699

Fax: +86 21-51821727 /+86 21-51821728

E-mail: sales@macklin.cn; tech@macklin.cn

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2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

no data available

HEALTH HAZARDS

Causes skin irritation. Causes serious eye damage. Causes serious eye irritation.

ENVIRONMENTAL HAZARDS

no data available

GHS label elements, including precautionary statements

Pictograms or hazard symbols



Signal word

Warning

Hazard statements

H315 Causes skin irritation

H318 Causes serious eye damage

H319 Causes serious eye irritation

Precautionary statements

Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P302+P352 IF ON SKIN: Wash with plenty of water/..

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance

with applicable laws and regulations, and product characteristics at time of disposal.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components: Calcium carbonate

CAS No.: 471-34-1

Chemical Formula: CaCO_3

4. FIRST AID MEASURES

4.1 Description of necessary first-aid measures

If inhaled

Fresh air.

Following skin contact

Rinse skin with plenty of water or shower.

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible).

Following ingestion

Rinse mouth.

4.2 Most important symptoms/effects, acute and delayed

Exposure Routes: inhalation, skin and/or eye contact Symptoms: Irritation eyes, skin, respiratory system; cough Target Organs: Eyes, skin, respiratory system (NIOSH, 2016)

Exposure Routes: inhalation, skin and/or eye contact Symptoms: Irritation eyes, skin, mucous membrane; cough, sneezing, rhinorrhea (discharge of thin mucus); lacrimation (discharge of tears) Target Organs: Eyes, skin, respiratory system (NIOSH, 2016)

Exposure Routes: inhalation, skin and/or eye contact Symptoms: Irritation eyes, skin, mucous membrane, upper respiratory system; cough, sneezing, rhinorrhea (discharge of thin mucus); lacrimation (discharge of tears) Target Organs: Eyes, skin, respiratory system (NIOSH, 2016)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

A serum calcium concentration exceeding 2.6 mmol per liter (10.5 mg per 100 mL) is considered a hypercalcemic condition. Withholding additional administration of calcium and any other medications that may cause hypercalcemia usually resolves mild hypercalcemia in asymptomatic patients, when patient renal function is adequate. Calcium supplements

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media

In case of fire in the surroundings, use appropriate extinguishing media.

5.2 Specific hazards arising from the chemical

Not combustible.

5.3 Special protective actions for fire-fighters

In case of fire in the surroundings, use appropriate extinguishing media.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers.

6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers.

6.3 Methods and materials for containment and cleaning up

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Separated from acids, aluminium, ammonium salts, fluorine and magnesium. Separated from acids, aluminium and ammonium salts.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values

no data available

Biological limit values

no data available

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Personal protective equipment

Eye/face protection

Wear safety goggles.

Skin protection

Protective gloves.

Respiratory protection

Avoid inhalation of dust. Use local exhaust.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Solid. Powder.

Colour

White.

Odour

Odorless

Melting point/freezing point

825 °C. Remarks: Calcium carbonate (aragonite); 1 330 °C. Remarks: Calcium carbonate (calcite).

Boiling point or initial boiling point and boiling range

333.6°C at 760mmHg

Flammability

Noncombustible Solid

Lower and upper explosion limit/flammability limit

no data available

Flash point
197°C

Auto-ignition temperature
no data available

Decomposition temperature
825°C

pH
pH = 8 to 9

Kinematic viscosity
no data available

Solubility
0.001 % (NIOSH, 2016)

Partition coefficient n-octanol/water
no data available

Vapour pressure
0 mm Hg (approx) (NIOSH, 2016)

Density and/or relative density
2.93 g/cm³. Temperature:20 °C.;2.71 g/cm³. Temperature:20 °C.

Relative vapour density
no data available

Particle characteristics
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Decomposes above 825°C . This produces corrosive fumes of calcium oxide. Reacts with acids, aluminium, ammonium salts, fluorine and magnesium.

10.2 Chemical stability
Indefinite shelflife.

10.3 Possibility of hazardous reactions

Not combustible. CALCIUM CARBONATE is non-combustible. Decomposes at high temperature (825°C) to give gaseous carbon dioxide and calcium oxide (quicklime). Incompatible with acids, alum, ammonium salts, fluorine, magnesium. Reacts with acids and acidic salts to generate gaseous carbon dioxide with effervescence (bubbling). The reaction with concentrated solutions of acids is rapid and exothermic. The effervescence can create extensive foaming. Ignites on contact with fluorine.

10.4 Conditions to avoid
no data available

10.5 Incompatible materials

Calcium carbonate ... ignite and burn fiercely in contact with fluorine. Fluorine: metal salts

10.6 Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating vapors.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
Oral: LD50 Mouse oral 6450 mg/kg bw
Inhalation: LC50 - rat (male/female) - > 3 mg/L air (analytical).
Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

Skin corrosion/irritation
no data available

Serious eye damage/irritation
no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity
no data available

Reproductive toxicity
no data available

STOT-single exposure
May cause mechanical irritation to the respiratory tract and eyes.
STOT-repeated exposure
Health effects of the substance have been investigated but none have been found

Aspiration hazard
A nuisance-causing concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: LC50 - *Oncorhynchus mykiss* (previous name: *Salmo gairdneri*) - > 100 % v/v saturated solution - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - > 100 % v/v saturated solution - 48 h.

Toxicity to algae: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - > 14 mg/L - 72 h.

Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 3 h. Remarks: Respiration rate.

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage

or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. TRANSPORT INFORMATION

14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.) IMDG: Not dangerous goods. (For reference only, please check.) IATA: Not dangerous goods. (For reference only, please check.)

14.5 Environmental hazards

ADR/RID: No IMDG: No IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

EC number

207-439-9

European Inventory of Existing Commercial Chemical Substances (EINECS) Listed.

EC Inventory Listed.

United States Toxic Substances Control Act (TSCA) Inventory Listed.

China Catalog of Hazardous chemicals 2015 Not Listed.

New Zealand Inventory of Chemicals (NZIoC) Listed.

Philippines Inventory of Chemicals and Chemical Substances (PICCS) Listed.

Vietnam National Chemical Inventory Listed.

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) Listed.

Korea Existing Chemicals List (KECL) Listed.

16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.