

Material Safety Data Sheet (MSDS)

Product Name: Precipitated Calcium Carbonate

MSDS Generate Date: 20-05-2017

Revision Date: 30-12-2024

Supplier:

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1. Identification of the Substance and Company

Product Name: Precipitated Calcium Carbonate (PCC)

Chemical Name: Calcium Carbonate

Synonyms: PCC, Synthetic Calcium Carbonate, Light Calcium Carbonate

CAS Number: 471-34-1

Molecular Formula: CaCO_3

Molecular Weight: 100.09 g/mol

Recommended Use:

Pharmaceutical excipient, food additive, nutraceutical formulations, cosmetics, personal care products, paper, plastics, paints, rubber, adhesives, and industrial applications.

2. Hazard Identification

GHS Classification: The product is **not classified as hazardous** according to the Globally Harmonized System (GHS).

Potential Health Effects:

Inhalation: Dust may cause temporary irritation of the nose, throat, and respiratory tract.

Skin Contact: Prolonged or repeated contact may cause slight skin irritation or dryness.

Eye Contact: Dust may cause temporary redness, watering, and mechanical irritation.

Ingestion: Low toxicity. Large quantities may cause mild gastrointestinal discomfort.

Environmental Hazards: No significant environmental hazards are known.

Precautionary Statements:

- Avoid breathing dust.
- Avoid excessive dust generation.
- Use adequate ventilation.
- Wear suitable personal protective equipment.
- Wash thoroughly after handling.

3. Composition / Information on Ingredients

Chemical Name: Calcium Carbonate

Common Name: Precipitated Calcium Carbonate (PCC)

CAS Number: 471-34-1

Molecular Formula: CaCO_3

Purity: Typically 98.0% or higher (depending on grade)

Product Description: Fine white synthetic calcium carbonate powder produced by controlled precipitation.

The product consists primarily of highly purified calcium carbonate. Minor impurities, if present, are maintained within the applicable specification limits.

4. First Aid Measures

Inhalation: Move the affected person to fresh air. Seek medical attention if irritation persists.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Immediately flush eyes with clean water for at least 15 minutes. Remove contact lenses if present. Seek medical attention if irritation continues.

Ingestion: Rinse mouth with water. Drink plenty of water. Obtain medical advice if symptoms occur.

Most Important Symptoms: Mild eye irritation, Respiratory tract irritation, Temporary skin dryness.

5. Fire Fighting Measures

Suitable Extinguishing Media: Use extinguishing media appropriate for the surrounding fire.

Unsuitable Extinguishing Media: None known.

Fire and Explosion Hazards: The product is non-combustible and does not support combustion.

Hazardous Combustion Products: None. Thermal decomposition above approximately 825°C releases carbon dioxide.

Protective Equipment: Wear self-contained breathing apparatus and protective clothing when fighting surrounding fires.

6. Accidental Release Measures

Personal Precautions:

- Avoid generating dust.
- Ensure adequate ventilation.
- Wear suitable respiratory protection if required.

Environmental Precautions: Prevent excessive quantities from entering drains or natural waterways.

Cleanup Procedures: Sweep or vacuum carefully to minimize dust formation. Place collected material into suitable containers for reuse or disposal.

7. Handling and Storage

Handling

- Avoid excessive dust formation.
- Avoid breathing airborne dust.
- Follow good industrial hygiene practices.
- Use adequate ventilation.

Storage

Store in tightly closed containers in a cool, dry, and well-ventilated area.

Protect from moisture, contamination, and strong acids.

8. Exposure Controls / Personal Protection

- **Engineering Controls:** Provide local exhaust ventilation where dust is generated.

Personal Protective Equipment:

- **Respiratory Protection:** Approved dust mask or respirator where necessary.
- **Eye Protection:** Safety goggles or safety glasses.
- **Hand Protection:** Protective gloves.
- **Skin Protection:** Protective clothing as required.

9. Physical and Chemical Properties

Appearance: Fine white powder

Odor: Odorless

Physical State: Solid powder

pH (10% Suspension): Approximately 8.5–10.5

Melting Point: Decomposes above approximately 825°C

Boiling Point: Not applicable

Bulk Density: Varies according to grade

Specific Gravity: Approximately 2.70

Solubility: Practically insoluble in water; soluble in dilute mineral acids with evolution of carbon dioxide

Flash Point: Not applicable

Auto-Ignition Temperature: Not applicable

Explosive Properties: None

Oxidizing Properties: None

Vapor Pressure: Not applicable

Vapor Density: Not applicable

10. Stability and Reactivity

Reactivity: Stable under recommended storage conditions.

Chemical Stability: Stable under normal handling and storage conditions.

Conditions to Avoid: Moisture, Strong acids, Excessive heat.

Incompatible Materials: Strong acids and strong oxidizing agents.

Hazardous Decomposition Products: Carbon dioxide may be released upon thermal decomposition or reaction with acids.

11. Toxicological Information

Acute Toxicity: Low acute toxicity.

Skin Irritation: May cause slight irritation due to mechanical abrasion.

Eye Irritation: Dust may cause temporary irritation.

Respiratory Effects: Dust may irritate the upper respiratory tract.

Carcinogenicity: Not classified as carcinogenic.

Mutagenicity: Not known to be mutagenic.

Reproductive Toxicity: No known reproductive effects.

12. Ecological Information

Ecotoxicity: Not expected to be harmful to aquatic organisms.

Persistence and Degradability: Naturally occurring inorganic mineral; not biodegradable.

Bioaccumulative Potential: Not expected to bioaccumulate.

Mobility: Low mobility in soil.

Environmental Effects: No significant adverse environmental effects anticipated.

13. Disposal Considerations

Dispose of product and contaminated packaging according to applicable local, state, and national regulations.

Avoid unnecessary release into drains, sewers, or surface waters.

14. Transport Information

Precipitated Calcium Carbonate is **not classified as dangerous goods** under national or international transport regulations. The product is a stable, non-flammable, non-toxic inorganic

mineral material and presents no significant transportation hazards when properly packaged and handled.

UN Number: Not regulated.

UN Proper Shipping Name: Not regulated.

Transport Hazard Class: Not regulated.

Packing Group: Not regulated.

Environmental Hazard: Not classified as environmentally hazardous.

Marine Pollutant: No.

Road Transport (ADR/RID): The product is not regulated as dangerous goods for road or rail transport. Transport in sealed bags, HDPE bags, fiber drums, or suitable containers to prevent contamination and moisture absorption. Protect packaging from tearing and physical damage.

Sea Transport (IMDG): The product is not regulated under the International Maritime Dangerous Goods (IMDG) Code. It is not classified as a marine pollutant and requires no special hazard labels or segregation. Containers should remain dry and securely closed throughout marine transportation.

Air Transport (IATA): Precipitated Calcium Carbonate is not regulated as dangerous goods under International Air Transport Association (IATA) regulations. Standard commercial packaging is acceptable. Packaging should minimize dust release and prevent contamination during transport.

Special Transport Precautions:

- Transport only in clean, dry, and properly sealed containers.
- Protect from rain, humidity, and direct sunlight.
- Prevent physical damage to packaging during loading and unloading.
- Avoid generating airborne dust.
- Keep away from strong acids and incompatible materials during transportation.
- Secure cargo to prevent shifting and package damage.
- Maintain good housekeeping during loading and unloading operations.

Transport in Bulk According to MARPOL Annex II and IBC Code: Not applicable.

Emergency Transport Information: In the event of accidental spillage during transportation, isolate the affected area if necessary, avoid generating dust, and collect the spilled material by sweeping or vacuuming using suitable equipment. Prevent material from entering drains or waterways. Dispose of collected material according to local environmental regulations. Personnel should wear appropriate personal protective equipment during cleanup.

15. Regulatory Information

- This product is not classified as hazardous under the Globally Harmonized System (GHS).
- Manufactured in accordance with applicable industrial, pharmaceutical, food, or cosmetic quality standards depending on the product grade.
- No special hazard labeling is required under normal conditions of use.

16. Other Information

The information contained in this Material Safety Data Sheet is based on current scientific knowledge and industrial experience. It is intended solely to provide guidance for the safe handling, storage, transportation, processing, and disposal of the product. It should not be interpreted as a guarantee of product properties or suitability for any specific application.

- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.