

Date of update: 01st Feb 2025

Version: 01

1. Identification of the substance and company's information

Product Name: Ceramat Beta-Tricalcium Phosphate

Compound name: β -Tricalcium Phosphate(β -TCP)

Synonyms: Calcium phosphate $\text{Ca}_3(\text{PO}_4)_2$; Tricalcium phosphate; Calcium phosphate tribasic.

Chemical formula: $\text{Ca}_3(\text{PO}_4)_2$

Chemical family: Inorganic compound

Particle size (For Granules): 1 mm to 3 mm, 3 mm to 5 mm, 5 mm to 8 mm.

Particle size (For Powder): $\leq 100 \mu\text{m}$

Application of the substance: Used as raw material for formation of bone void fillers.

Manufacturer/Supplier:

Ceramat Private Limited

Site1: Unit No.- 105, Krisha Industrial Estate, Dhumalnagar, Near Waliv, Vasai East, 401208, India

Site2: Unit No. 14, Sethia Industrial Park, S.No. 39/1, Bilalpada, Vasai East- 401208, Maharashtra,

Emergency telephone number: +91-8857861496, 9665888516

2. Hazards identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazard not otherwise classified (HNOC): None identified.

3. Composition/Information on ingredients

Chemical characterization:

CAS No.: 7758-87-4; β -Tricalcium Phosphate(β -TCP) [$\text{Ca}_3(\text{PO}_4)_2$]

4. Chemical/Physical properties & General Information

Colour: White

Physical state: Solid

Chemical Formula: [$\text{Ca}_3(\text{PO}_4)_2$]

Formula Mass: 310.18 g/mol

Form: Powder, finer and coarser particles.

Particle size (For Granules): 1 mm to 3 mm, 3 mm to 5 mm, 5 mm to 8 mm.

Particle size (For Powder): $\leq 100 \mu\text{m}$

Odour: Odourless

Melting point: 1670°C

Boiling point: No information available.

Flash point: Not applicable

Flammability: No information available.

Danger of explosion: Product does not present an explosion hazard.

Theoretical density: 3.14 gm/cc

Apparent specific weight: (no compacted powder): 0.1 to 1.5 gm/cc.

Solubility: Insoluble in water.

5. Proposed First-aid measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation: Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion: Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects: None reasonably foreseeable.

Notes to Physician: Treat symptomatically

6. Fire -fighting measures

Suitable extinguishing Media: Substance is non-flammable; use agent most appropriate to extinguish surrounding fire.

Special hazards arising from the substance: Keep product and empty container away from heat and sources of ignition.

Protective equipment: No special measures required.

7. Accidental release measures

Personal precautions, protective equipment, and emergency procedures:

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

Environmental precautions: Should not be released into the environment. See Section 12 for additional Ecological Information.

Method and material for containment and cleaning up: Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

8. Handling and storage

The powder is packed in sterilized and sealed High-Density Polyethylene (HDPE) containers.

Information for safe handling: No special measures required.

Information about fire-and explosion protection: No special measures required.

Storage: No special requirements.

Information about storage in one common storage facility: No issues in such storage.

Further information about storage conditions: Store as supplied until used.

9. Exposure controls/personal protection

Additional information about design of technical facilities: Some sub-micron particles may be suspended in the air. Therefore, adapted ventilation in this zone is recommended otherwise the operator must wear a dust mask.

Personal protective equipment

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling thermal spray powders.

Respiratory protection:

Dust mask during the filling up of the powder feeder if the ventilation is not sufficient.

Protection of hands:

Protective gloves/prolonged handling of the powder tends to remove oils from the skin and lead to dryness.

Eye protection: Wear the safety glasses as airborne dust may cause eye irritation.

10. Stability and reactivity

Thermal decomposition: See section 4.

Dangerous reactions: No dangerous reactions known.

Dangerous decomposition products: Not known.

11. Toxicological information

Non-Toxic

Mutagenic Effects: No information available

Reproductive Effects: No information available.

Developmental Effects: No information available.

Teratogenicity: No information available.

STOT - single exposure: None known

STOT - repeated exposure: None known

Aspiration hazard: No information available

Symptoms / effects, both acute and delayed: No information available

Endocrine Disruptor Information: No information available

Other Adverse Effects: The toxicological properties have not been fully investigated

Primary irritant effect:

On the skin: None

On the eye: None

Sensitisation: None

Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects to our experience.

12. Ecological information

General notes:

Do not allow product to reach ground water, water course or sewage system in its unused form.

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Mobility in soil: No further relevant information available.

13. Disposal considerations

Waste treatment methods

Recommendation: Follow local regulation.

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary other cleansing agents.

14. Transport information

Land transport ADR/RID (cross-border)

ADR/RID class: No dangerous goods.

Maritime transport IMDG:

IMDG class: No dangerous goods.

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA class: No dangerous goods

Special precautions for user: Not applicable

Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: Not applicable

Transport /Additional information: Not dangerous according to the above specifications.

15. Regulatory information

Labelling according to EU guidelines:

The substance is not subject to classification according to EU lists and sources of literature known to us. Safety, health and environmental regulations/legislation specific for the substance or mixture SARA (Superfund Amendments and reauthorization Act of 1986-USA).

Section 302/304 (40CFR355.30/40CFR355.40): Substance not listed.

Section 313 (40CFR372.65): Substance not listed.

TSCA (Toxic Substances Control Act): Substance is not listed carcinogenic categories.

EPA (Environmental Protection Agency): Substance is not listed.

TLV (Threshold Limit Value established by ACGIH): Substance is not listed.

MAK (German Maximum Workplace Concentration): Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is not listed.

16. Other Information:

The above information is believed to be correct to our knowledge but does not purport to be all inclusive and shall be used as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product and shall not establish a legally valid contractual relationship.