



Material Safety Data Sheet

Tricalcium Phosphate

Edition: 14/10/2014

In compliance with Regulation (EC) 1907/2006,
Regulation (EC) 1272/2008 and Regulation (EC)
453/2010

1) Identification of substance/preparation and of the company undertaking

Material	Tricalcium Phosphate
Synonyms:	Calcium Orthophosphate, Calcium Phosphate Hydroxide, Calcium Phosphate, Tricalcium Orthophosphate, Tribasic, Hydroxylapatite, Hydroxyapatite
EC No	215-145-7
CAS No	1306-06-5
REACH Registration No	01-211940075-38-XXXX
Company	Inoxia Ltd 45.7 Dunsfold Park Stovolds Hill Cranleigh Surrey GU6 8TB Tel: 02032 909990 safety@inoxia.co.uk www.inoxia.co.uk

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation:

Substance used as such, in formulation or in formulation of products such as:

- Food industry
- Free Flow agent
- Ceramics
- Polymers
- Chemical industry

1.2.2. Uses advised against

None identified.

Full text of use descriptors: see section 16.

2) Hazards identification.

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects

Irritating to eyes, respiratory system and skin

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

GHS 07

Signal word: WARNING



Hazard statements:

H315: Causes skin irritation

H319: Causes serious eye irritation

H335: May cause respiratory irritation

Precautionary statements:

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray

P264: Wash thoroughly after handling

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P280: Wear protective gloves/protective clothing/eye protection/face protection

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

3) Composition/information on ingredient

3.1. Substances

Chemical name: Tricalcium Phosphate

CAS No.: 1306-06-5

EC no: 215-145-7

%: 100

Classification EC 1272/2088: Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit 2; H315

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4) First Aid Measures

4.1. Description of first aid measures

First-aid measures after inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

First-aid measures after skin contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs get medical attention/advice. Remove clothing and wash thoroughly before use.

First-aid measures after eye contact: Make sure to remove any contact lenses from the eyes before rinsing. Rinse eye with water immediately for at least 15 minutes. Get medical attention if any discomfort continues.

First-aid measures after ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort continues

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

Inhalation: Irritating to respiratory tract. Toxic to lungs and mucous membranes.

Ingestion: Ingestion of large quantities may cause nausea, vomiting, diarrhoea, abdominal cramps.

Skin contact: Powder may irritate the skin

Eye contact: Cause serious eye irritation

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

Treat symptomatically.

5) Fire Fighting

5.1. Extinguishing media

Suitable extinguishing media: Water, dry powder, carbon dioxide, foam

Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Non combustible

Explosion hazard: No explosive properties known.

Reactivity: No information available.

Hazardous combustion products: In combustion emits toxic fumes

5.3. Advice for firefighters

Protection during firefighting: Use of approved supplied air or self-contained breathing apparatus operated in positive pressure mode are satisfactory. Totally impervious protective suits, gloves, and boots must be worn.

6) Accidental Release

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and soil. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production. Do not flush with water or aqueous cleaning agents.

6.4. Reference to other sections

See section 8 and 13 for more information.

7) Handling/Storage

7.1. Precautions for safe handling

Precautions for safe handling: Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

Packagings: Even those that are empty, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

Hygiene measures: When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

The identified uses for this product are detailed in section 1.2

8) Exposure Controls/Personal Protection

8.1. Control parameters

Name: Tricalcium Phosphate (as nuisance dust)

STD: WEL

TWA (Total dust): 10 mg/m³

TWA (Resp. dust): 4 mg/m³

WEL: Workplace exposure limit.

8.2. Exposure controls

Appropriate engineering controls: Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

Hand protection: Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves' manufacturer.

Eye protection: Wear safety glasses with side shields according EN 166.

Skin and body protection: Wear closed protective clothing.

Respiratory protection: Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001

Environmental exposure controls: Avoid release to the environment.

9) Physical/Chemical Properties

Physical state	Solid powder
Colour	White
Odour	Odourless
Odour threshold	No data available
pH-	No data available
Relative evaporation rate (butylacetate=1)	No data available
Melting point	1,100 ⁰ C
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Auto ignition temperature	No data available
Decomposition temperature	No data available
Flammability	Not flammable
Percent volatility	No data available
Vapour density	No data available
Relative density	No data available
Bulk Density	No data available
Solubility in water	Insoluble
Log Pow	No data available
Log Kow	Not applicable
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Explosive properties	Not explosive
Oxidising properties	Not an oxidiser
Explosive limits	Not explosive

9.2. Other information

Molecular weight: ?????g/mol

10) Stability/Reactivity

10.1. Reactivity

Stable under known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions, temperatures and pressures.

10.3. Possibility of hazardous reactions

Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Sources of ignition

10.5. Incompatible materials

Strong oxidising agents.

10.6. Hazardous decomposition products

Oxides of phosphorus, calcium oxide.

11) Toxicological Info

11.1. Information on toxicological effects

Acute Toxicity:- LD50 Ingestion/Oral Rat: >25,350mg/kg. Oral Mouse: 99,500mg/kg

LD50 Skin Rat: 2,000mg/kg

Irritation: Eye Rabbit: 100mg/kg. Mild irritation

Skin Rabbit: 500mg/kg. Mild irritation

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
STOT – single exposure	Based on available data, the classification criteria are not met.
STOT – repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

12) Ecological Information

12.1. Ecoxicity

Not applicable.

12.2. Persistence and degradability

Deposits as mud in waste water.

12.3. Bioaccumulative potential

No data found for product.

12.4. Mobility in soil

Insoluble in water.

12.5. Results of PBT and vPvB assessment

This substance is not identified as a PBT or vPvB substance

12.6. Other adverse effects

Do not allow product to reach ground water, water course or sewage system

13) Disposal Considerations

13.1. Waste treatment methods

Waste treatment methods: Dispose of this material and residues in accordance with local, national and international authority requirements.

Additional information: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above.

Ecology - waste materials: See the European waste catalogue.

14) Transport Information

14.1 UN Number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2 UN Proper Shipping Name

Not classified for transportation.

14.3 Transport Hazard Class(es)

Not classified for transportation.

14.4. Packing group

Not classified for transportation.

14.5. Environmental hazards

Other information: No environmental hazards known with this product

14.6. Special precautions for user

Not classified for transportation

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15) Regulatory Information

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

Approved code of practice: Classification and labelling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.

Guidance notes: Workplace Exposure Limits EH40.

EU Legislation:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

(REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment.

No chemical safety assessment has been carried out

16) Other Information

Abbreviations and acronyms:

ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways

ADR: European Agreement concerning international carriage of Dangerous goods by Road

AF: Assessment factor

BCF: Bioconcentration factor

Bw: Body weight

CAS: Chemical Abstracts Service

CLP: Classification, labelling, packaging

CSR: Chemical Safety Report

DMEL: Derived maximum effect level

DNEL: Derivative No effect Level

EC: European Community

ELV: Emission limit values

EN: European Norm

EUH: European Hazard Statement

EWC: European Waste catalogue

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

LC50: Median lethal concentration

LD50: Median lethal dose

NOAEL: No-observed-adverse-effect-level

NOEC: No observed effect concentration

NOEL: No observed effect level

OEL: Operator exposure level

PBT: Persistent, bioaccumulative, Toxic

PEC: Predicted effect level

PNEC: Predicted No effect Concentration

REACH: Registration, evaluation and autorisation of chemicals

RID: Regulations concerning the international carriage of dangerous goods by rail

STEL: Short Term Exposure Limit

TWA: Time weighted average

vPvB: Very persistent, very bioaccumulative.

Training advice: None.

Full text of H-Statements referred to under sections 2 and 3

H315: Causes skin irritation

H319 - Causes serious eye irritation

H335: May cause respiratory irritation

Full text of P-Statements referred to under sections 2 and 3

P261: Avoid breathing dust/fumes/gas/mist/vapours/spray

P264: Wash thoroughly after handling

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P280: Wear protective gloves/protective clothing/eye protection/face protection

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.