

## Tricalcium Phosphate

Version number: 1.0

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### SECTION 1: Identification

#### 1.1 Product identifier

**Identification of the substance** tricalcium bis(orthophosphate)

**Trade name** Tricalcium Phosphate

**CAS number** 7758-87-4

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

**Relevant identified uses** General use

#### 1.3 Details of the supplier of the safety data sheet

Valudor Products, LLC  
179 Calle Magdalena Suite 100  
Encinitas, California CA 92024  
United States

Telephone: +1 (760) 635 8500  
e-mail: info@valudor.com  
Website: www.valudor.com

#### 1.4 Emergency telephone number

**Emergency information service** 800-535-5053 (Infotrac)

As above or next toxicological information centre.

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

**Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

This substance does not meet the criteria for classification.

#### 2.2 Label elements

**Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)**

Not required.

#### 2.3 Other hazards

**Results of PBT and vPvB assessment**

According to the results of its assessment, this substance is not a PBT or a vPvB.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

<b>Name of substance</b>	tricalcium bis(orthophosphate)
<b>Identifiers</b>	
CAS No	7758-87-4
<b>Molecular formula</b>	Ca <sub>3</sub> O <sub>8</sub> P <sub>2</sub>
<b>Molar mass</b>	310.2 g/mol
<b>Purity</b>	90.00 - 99.99 %

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

Wash with plenty of soap and water.

#### Following eye contact

Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

#### Following ingestion

Rinse mouth immediately and drink plenty of water.

Get medical advice/attention if you feel unwell.

#### Notes for the doctor

None.

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

Following inhalation: Cough, pain, choking, and breathing difficulties.

Following ingestion: Gastrointestinal complaints. Nausea. Diarrhoea. Vomiting.

Following skin contact: Causes mild skin irritation. Localized redness.

Following eye contact: Causes slight to moderate irritation.

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

None.

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## SECTION 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

coordinate firefighting measures to the fire surroundings

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

#### Hazardous combustion products

pyrolysis products, toxic

### 5.3 Advice for firefighters

Non-combustible.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### Special protective equipment for firefighters

self-contained breathing apparatus (SCBA)

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Ventilate affected area.

Control of dust.

Avoid breathing dust.

Avoid contact with skin and eyes.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

Special danger of slipping by leaking/spilling product.

#### For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

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## **Advice on how to contain a spill**

Take up mechanically.

## **Advice on how to clean up a spill**

Take up mechanically.

Collect spillage.

## **Other information relating to spills and releases**

Place in appropriate containers for disposal.

Ventilate affected area.

## **6.4 Reference to other sections**

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.

#### **Specific notes/details**

None.

#### **Measures to protect the environment**

Avoid release to the environment.

#### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe dust.

Avoid contact with skin and eyes.

Wash hands after use.

Preventive skin protection (barrier creams/ointments) is recommended.

### **7.2 Conditions for safe storage, including any incompatibilities**

#### **Flammability hazards**

None.

#### **Incompatible substances or mixtures**

Incompatible materials: see section 10.

Store away from acids.

#### **Protect against external exposure, such as**

heat

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## Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

## Ventilation requirements

Provision of sufficient ventilation.

## Specific designs for storage rooms or vessels

Store in a dry place. Store in a closed container.

Store in a well-ventilated place. Keep cool.

## Packaging compatibilities

Keep only in original container.

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No data available.

### 8.2 Exposure controls

#### Appropriate engineering controls

Use local and general ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

Protective gloves		
Material	Material thickness	Breakthrough times of the glove material
CR: chloroprene (chlorobutadiene) rubber	≥ 0,65 mm	>480 minutes (permeation: level 6)
NBR: acrylonitrile-butadiene rubber	≥ 0,65 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### Body protection

Protective clothing for use against solid particulates.

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## Respiratory protection

In case of inadequate ventilation wear respiratory protection.

## Environmental exposure controls

Use appropriate container to avoid environmental contamination.  
Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

##### Physical state

solid  
(powder)

##### Color

white

##### Odor

odorless

#### Other safety parameters

##### pH (value)

not applicable

##### Melting point/freezing point

>450 °C  
(EU method A.1)

**Boiling point or initial boiling point and boiling range** not determined

##### Flash point

not applicable

##### Evaporation rate

not determined

##### Flammability (solid, gas)

non-combustible

#### Explosive limits

Explosion limits of dust clouds not determined

##### Vapor pressure

not determined

##### Density

not determined

##### Vapor density

not determined

##### Relative density

3.27 at 20.5 °C (water = 1)  
(EU method A.3)  
not applicable

#### Solubility(ies)

##### Water solubility

7.7 mg/l at 20 °C, (EU method A.6)  
insoluble

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## Partition coefficient

n-octanol/water (log KOW) not relevant  
(inorganic)

Auto-ignition temperature not determined

**Decomposition temperature** not relevant

**Viscosity** not relevant  
(solid)

**Explosive properties** none

**Oxidizing properties** none

**Information for relevant hazard classes according to GHS** hazard classes acc. to GHS (physical hazards):  
not relevant

**9.2 Other information** there is no additional information

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

acids

### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.  
Hazardous combustion products: see section 5.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

This substance does not meet the criteria for classification.

#### Acute toxicity

Exposure route	Endpoint	Value	Species	Method
oral	LD50	>2,000 mg/kg	rat, female	OECD Guideline 420
inhalation: dust/mist	LC50	>2.6 mg/l/4h	rat	OECD Guideline 403
dermal	LD50	>2,000 mg/kg	rabbit	OECD Guideline 402

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

(OECD Guideline 439)

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

(OECD Guideline 405)

#### Respiratory or skin sensitization

##### Skin sensitization

Shall not be classified as a skin sensitizer.

(OECD Guideline 429)

#### Respiratory sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

(OECD Guideline 471, OECD Guideline 476, OECD Guideline 487)

#### Carcinogenicity

##### IARC Monographs

not listed

##### National Toxicology Program (United States)

not listed

##### OSHA Carcinogens

Not listed.



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## Reproductive toxicity

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

## Specific target organ toxicity - repeated exposure

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Other information

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Endpoint	Exposure time	Value	Species	Method
LC50	96 h	>100 mg/l	japanese ricefish/medaka ( <i>Oryzias latipes</i> )	OECD Guideline 203
EC50	48 h	>100 mg/l	daphnia magna	OECD Guideline 202
ErC50	72 h	>100 mg/l	algae ( <i>pseudokirchneriella</i> <i>subcapitata</i> )	OECD Guideline 201

#### Aquatic toxicity (chronic)

No data available.

### 12.2 Persistence and degradability

#### Biodegradation

The study does not need to be conducted because the substance is inorganic.

#### Persistence

The study does not need to be conducted because the substance is inorganic.

### 12.3 Bioaccumulative potential

No data available.

#### n-octanol/water (log KOW)

not relevant  
(inorganic)

### 12.4 Mobility in soil

No data available.

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## 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## 12.6 Other adverse effects

This information is not available.

### Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packages

Completely emptied packages can be recycled.  
Handle contaminated packages in the same way as the substance itself.

### Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

14.1 UN number not assigned

14.2 UN proper shipping name -

14.3 Transport hazard class(es) -

14.4 Packing group -

14.5 Environmental hazards -

14.6 Special precautions for user -

14.7 Transport in bulk according to IMO instruments -

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information

Not subject to transport regulations.

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## SECTION 15: Regulatory information

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

#### National regulations (United States)

**Toxic Substance Control Act (TSCA)** substance is listed

#### Superfund Amendment and Reauthorization Act (SARA TITLE III )

**The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)**

not listed

#### Specific Toxic Chemical Listings (EPCRA Section 313)

not listed

#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

**List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)**

not listed

#### Clean Air Act

not listed

#### Right to Know Hazardous Substance List

##### Hazardous Substance List (NJ-RTK)

not listed

**California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987**

not listed

**Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)**

not listed

#### Industry or sector specific available guidance(s)

##### NPCA-HMIS® III

Hazardous Materials Identification System.  
American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	0	material that will not burn under typical fire conditions

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Category	Rating	Description
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	-

## NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard	-	-

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance by the supplier.

## SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2022-05-11

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC	International Agency for Research on Cancer
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

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<b>Abbr.</b>	<b>Descriptions of used abbreviations</b>
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

## Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

## Responsible for the safety data sheet

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USA Website: www.crc-us.com

## Disclaimer

This information is based upon the present state of our knowledge.

This SDS has been compiled and is solely intended for this product.