



Material Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: DICALCIUM PHOSPHATE DIHYDRATE
Reference Number: AST10005
Date: November 1, 2005
Chemical Family: Phosphate Salts
Chemical Name: Dicalcium Phosphate Dihydrate
Synonyms: DCPD; Calcium Monohydrogen Phosphate; Dicalcium Orthophosphate, Dihydrate; Calcium Phosphate, Dibasic.

Use of the substance or preparation

Food ingredient, dentifrice ingredient, agricultural chemical

Company/Undertaking Identification:

ICL PERFORMANCE PRODUCTS LP
622 Emerson Road - Suite 500
St. Louis, Missouri 63141

Emergency telephone: In USA call CHEMTREC: 1 800 424 9300
In Canada call CANUTEC: 1 613 996 6666

General Information: + 1 800 244 6169 (Worldwide)

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>%w/w</u>	<u>EINECS No.</u>	<u>Risk Phrases</u>
Dicalcium Phosphate Dihydrate	7789-77-7	100	not applicable*	None

* Registration, classification, inventory and information found in Sections 2 thru 16 for this product are based upon the hydrated form of Dicalcium Phosphate, Anhydrous EINECS No. 231-826-1

3. HAZARDS IDENTIFICATION

Classification of the substance/preparation

EC Classification None
Safety Phrase None

Human Health Effects

Likely routes of exposure are skin contact and inhalation. Inhalation of dust may cause coughing and sneezing. Dry powder may cause foreign body irritation in some individuals. Prolonged skin contact with dry powder may cause drying or chapping of the skin. Continuous contact can cause eye and skin irritation.

Environmental Effects

This material is not expected to product any significant adverse environmental effects when recommended use instructions are followed.

4. FIRST AID MEASURES

General

Product has low toxicity and is generally regarded as safe as a food additive. Treatment is symptomatic and supportive.

Eye Contact

Avoid contact with eyes. In case of contact, wash eyes with plenty of water. Seek medical attention if irritation develops or persists.

Skin contact

Remove this material from skin with plenty of soap and water.

Inhalation

Immediate first aid is not likely to be required, however if symptoms persist remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If breathing difficulty or discomfort occurs and persists, seek medical attention.

Ingestion

Immediate first aid is not likely to be required. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. A physician or Poison Control Center can be contacted for advice.

5. FIRE FIGHTING MEASURES

Extinguishing media

Non-combustible
No special requirement.
To extinguish fire use water, dry chemical, chemical foam, or alcohol-resistance foam.

Unsuitable extinguishable media

Non-combustible
No special requirement.

Exposure hazards

No special considerations.

Protective equipment

As a general precaution, firefighters and others exposed, wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

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Avoid unnecessary exposure and remove all material from eyes, skin and clothing.

Environmental precautions

Small quantities: Avoid discharge into the environment

Large quantities: Avoid discharge into the environment – See section 15.

Method for cleaning up

Sweep, scoop or vacuum spill material, contaminated soil and other contaminated material and place in clean, dry containers for removal. Clean the residual material by washing area with water and detergent.

7. HANDLING AND STORAGE

Handling

Handle in accordance with good industrial hygiene and safety practices.

Avoid contact with eyes.

Wash hands immediately after handling

Remove material from clothing.

Engineering measures

Provide natural or mechanical ventilation to control exposure levels below occupational exposure limits. The use of local mechanical exhaust ventilation is preferred at sources of air contamination such as open process equipment. Consult National Fire Protection Association (NFPA) Standard 91 for design of exhaust systems.

Storage

Store in cool, dry place to maintain product performance.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure limit

ACGIH TLV 10 mg/m³ (inhalable) 8-hr TWA, 3 mg/m³ (respirable) 8-hr TWA

OSHA PEL 15 mg/m³ (total dust) 8-hr TWA, 5 mg/m³ (respirable) 8-hr TWA

OSHA and ACGIH have not established specific exposure limits for this material. However, OSHA and ACGIH have established limits for particulates not otherwise regulated (PNOR) and particulates not otherwise classified (PNOC) which are the least stringent exposure limits applicable to dusts.

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

Respiratory protection

Avoid breathing dust. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure limits are exceeded. Consult the respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 C.F.R. 1910.134 or European Standard EN 149.

Hand/Skin protection

Wearing protective gloves is recommended; wash hands and contaminated skin thoroughly after

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handling.

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles as described in OSHA 29 CFR 1910.133 or European Standard EN166.

9. PHYSICAL AND CHEMICAL PROPERTIES**General information**

Chemical Formula:	CaHPO ₄ • 2H ₂ O
Form	Granules or powder
Color:	White
Odor:	None

Important health, safety and environmental information

pH:	7.2-7.5 (20g/80g H ₂ O)
Melting Point:	Decomposes at about 190 °C
Solubility in Water:	Practically insoluble (0.032 g./100 ml. H ₂ O)
Solubility in Other Solvents:	Readily soluble in dilute hydrochloric and nitric acids; insoluble in alcohol

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Product is stable under normal conditions of storage and handling. Store in a cool, dry place to maintain product performance.

Conditions to avoid

Store in cool, dry area away from moisture.

Materials to avoid

None known.

Hazardous decomposition

None known.

11. TOXICOLOGICAL INFORMATION**Laboratory data**

Data from ICL Performance Products LP single-dose (acute) animal studies with this material are given below:

Oral - rat LD50: > 10,000 mg/kg; practically nontoxic
Dermal - rabbit LD50: > 7,940 mg/kg; practically nontoxic
Eye Irritation - rabbit: 3.3/110.0; nonirritating
Skin Irritation - rabbit: 0.0/8.0; nonirritating

Information above is based upon the anhydrous form of dicalcium phosphate.
No adverse genetic changes were reported in standard tests using bacterial cells.

12. ECOLOGICAL INFORMATION

Environmental toxicity

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity.

Invertebrate: 96-hr EC50 Daphnia magna: >1000 mg/L; Practically Nontoxic

ICL Performance Products LP has not conducted fish and algal toxicity studies with this material. However, available data for a similar material suggests that this material would be practically nontoxic to fish (LC50 or EC50 > 100 mg/L).

Environmental fate

Inorganic compounds in contact with the soil, sub-surface or surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates. The term biodegradability, as such, is not applicable to inorganic compounds.

13. DISPOSAL CONSIDERATIONS

European waste catalog number

The data provided in this section is for information only. Please apply the appropriate classification for your waste.

06 03 07 Waste from inorganic chemical processes, waste salts and their solutions, phosphates and related solid salts.

Disposal considerations

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Road/Rail, Sea and Air

IMDG/UN	Not regulated
ICAO/IATA passenger aircraft	Not regulated
RID/ADR	Not regulated
Canadian TDG	Not regulated
US DOT	Not regulated

13. REGULATORY INFORMATION

EC Label

Hazard symbol: None

Chemical Inventory

USA TSCA:	Listed*
Canada DSL:	Listed*
EC:	Listed*

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Japan	Listed*
Australia	Listed*
Korea	Listed*
Philippines	Listed*
China	Listed*

* The anhydrous form of dicalcium phosphate is listed in the above inventories.

WHMIS Classification Not Controlled

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370):	Not applicable
Section 302 Extremely Hazardous Substances:	Not Applicable
Section 313 Toxic Chemical(s):	Not Applicable

CERCLA Reportable Quantity: Not Applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contain all the information required by the Canadian Controlled Products Regulation.

Refer to Section 11 for OSHA Hazardous Chemical(s) and Section 13 for RCRA classification.

14. OTHER INFORMATION

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	
Suggested NFPA Rating*	1	0	0	
Suggested HMIS Rating*	1	0	0	E

E = safety glasses, gloves and dust respirator

* Rating is based upon the anhydrous form of dicalcium phosphate.

Reason for revision: New Company Supersedes MSDS dated: September 6, 2005
Drafted in accordance with ECC Dir 2001/58/EC

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