PETITION TO THE NATIONAL ORGANIC STANDARDS BOARD
For the Use of
CALCIUM ACID PYROPHOSPHATE
in Baked Goods

Item A:
This Petition supports the International Food Additives Council's (IFAC) request to amend the National List for "Nonagricultural (nonorganic) substances allowed in or on processed products labeled as 'organic' or made with organic (specified ingredients)" under Section 205.605(b). This Petition relates to Calcium Acid Pyrophosphate (CAPP) as described in the Food Chemicals Codex, as amended, including alternative nomenclature included therein, as described below. This Petition requests that CAPP be added to the National List "for use as a leavening agent" in baked goods.

Item B:
(1) COMMON NAME
Calcium Acid Pyrophosphate: (OTHER NAMES: Calcium Dihydrogen Diphosphate; Monocalcium Dihydrogen Pyrophosphate; Acid Calcium Pyrophosphate.)

(2) CONTACT INFORMATION
This Petition is submitted by the International Food Additives Council (IFAC), an international association representing manufacturers and suppliers of high quality ingredients used worldwide in food products. In particular, IFAC's Phosphates Committee is comprised of global suppliers of phosphates, used throughout the world in food products. The information contained in this Petition was compiled using information provided by the IFAC Phosphates Committee members.

Contact Information:
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International Food Additives Council
1100 Johnson Ferry Road
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(3) INTENDED USE OF THE SUBSTANCE

The intended purpose of calcium acid pyrophosphate is as leavening acid in baked products. Calcium phosphates have a long history of safe use in the baking industry, dating back to the early 1900s. This family of food additives is used to control chemical leavening in a variety of baking applications including:

- fine cake products,
- dry mixes,
- batters,
- self rise flours and
- Baking powders.

The use of calcium acid pyrophosphate has risen in popularity due to health benefits afforded by "low sodium" products. CAPP is the calcium analog to Sodium Acid Pyrophosphate (CAS # 7758–16–9) which is already on "The National List of Allowed and Prohibited Substances" permitted for use as a leavening agent in baked goods. While CAPP can not be considered a direct replacement for Sodium Acid Pyrophosphate due to its different reaction profile, it does offer the food formulator a low sodium option for certain recipes. Because of the health benefits associated with lowering total dietary sodium, it is felt that the organic market could benefit significantly by adding CAPP to the National List.

(4) This will not be used on crops of livestock therefore no rate or method of use is required.

(5) SOURCE OF SUBSTANCE/DESCRIPTION OF MANUFACTURING PROCESS

The typical method of manufacture is described below:

Food grade phosphoric acid, produced from phosphate rock, is reacted with calcium oxide (lime) to precipitate calcium dihydrogen phosphate. The calcium dihydrogen phosphate is filtered and undergoes calcination at 270^{o}C to form Calcium acid pyrophosphate with a molar ratio of about 1:2.

Below is the chemistry outlining the manufacture of Calcium acid pyrophosphate:

Phosphoric acid + Lime → Calcium dihydrogen phosphate

$2\ H_3(PO_4)$ + CaO → $Ca(H_2PO_4)_2$

Calcium dihydrogen phosphate + heat → Water + Calcium acid pyrophosphate

$\xrightarrow{\Delta}$

$Ca(H_2PO_4)_2$ → H2O + $CaH_2P_2O_7$

The material is then milled to a powder and packaged under Good Manufacturing Practices following HACCP plans. Testing of the final product is done in accordance with the Food Chemicals Codex (FCC) monograph specifications.

(6) No reviews by State or private certification programs have been found.

(7) REGULATORY STATUS

Calcium Acid Pyrophosphate has a long history of safe use in the baking industry. It can be used as a low sodium alterative to other leavening acids. This substance is considered safe and approved for use in foods by many international regulatory agencies. CAPP is approved for use both as a nutrient and as a leavening agent.

United States Food and Drug Regulatory Status: In the US, the FDA has deemed Calcium Acid Pyrophosphate as Generally Recognized As Safe (GRAS) by a published regulation (21 CFR 182.8223). The safety of this substance was reviewed by the Select Committee on GRAS Substances (SCOGS) review of GRAS substances conducted from 1972 to 1980, wherein Calcium Acid Pyrophosphate was affirmed as GRAS with no limitations other than Good Manufacturing Practices. Also, it is noted that the Food Chemicals Codex (FCC), Sixth Edition (2008-2009) contains a monograph for Calcium Acid Pyrophosphate, which indicates food grade status in the US as a leavening agent and nutrient in food.

The citation for the FDA regulation for Calcium Acid Pyrophosphate is provided above. There are no EPA or state registration numbers for Calcium Acid Pyrophosphate nor are any required.

Additional Regulatory Status (International):

Codex Alimentarius Commission Status: The Codex Committee on Food additive (CCFA) was formed under the Codex Alimentarius Commission and is responsible for assuring the safety and use of food additives used by member countries of the United Nations. The CCFA has promulgated a Codex General Standard for Food Additives (CODEX STAN 192-1995) which was adopted in 1995 with periodic revisions including the most recent in 2008. Table One of this standard includes, among other food phosphates, Calcium Dihydrogen Diphosphate (Calcium Acid Pyrophosphate), INS 450 (vii). Table One lists food additives with numerical Acceptable Daily Intakes (ADI) adopted by the Joint FAO/ WHO Expert Committee on Food Additives (JECFA), international recognized categories of use, maximum levels of use in each food category and technological functions. The JECFA has reviewed the safety of phosphates and has promulgated an ADI expressed as Maximum Tolerable Daily Intake (MTDI) of 70 mg (phosphorus basis)/kg body weight, which includes phosphorus from all dietary sources.

European Union Regulatory Status: The EU Food Standards Agency, on July 27, 2007, published a list of current EU approved additives and their E Numbers. This list includes all EU approved colors, preservatives, antioxidants, sweeteners, emulsifiers, stabilizers, thickeners, gelling agents, and "others." The "others" category includes "E 450 diphosphates." Another EU document (1996L0077, 29.12.1998) contains a specification for "E 450 (vii) Calcium Acid Pyrophosphate." This means that all EU countries may use this substance in food.

Japan Food Sanitation Law Regulations: Table 1 of the Article 12 of the Enforcement Regulations under the Food Sanitation Law contains a reference to substance "No.273 Calcium Dihydrogen Pyrophosphate (Acid calcium pyrophosphate)." This provides the regulatory basis for the food use of this substance in Japan.

(8) The Chemical Abstract Service (CAS) number or other product numbers.

For Calcium Acid Pyrophosphate:

- CAS # 14866-19-4
- International Number System (INS) Number: 450(vii)
- EINECS # 238-933-2

Monographs stating specifications for purity and safety considerations for use of Calcium Acid Pyrophosphate (or listed on other recognized synonyms) in food products are published in various compendia, including:

- Food Chemicals Codex (FCC), prepared by the Council of Experts, published by the Board of Trustees, US Pharmacopeial Convention
- Joint FAO/WHO Expert Committee on Food Additives (JECFA), a joint effort of the Food and Agriculture Organization of the United Nations and the World Health Organization
- European Commission's Directive 96/77/EC, specifications for food additives, & update 82/02/EC in October 2002
- Japan's Specifications and Standards for Food Additives (JSFA), of the Ministry of Health and Welfare of Japan

(9) PHYSICAL PROPERTIES AND CHEMICAL MODE OF ACTION

Molecular formula: $Ca_2H_2P_2O_7$
Molecular weight: 216.04

Calcium Acid Pyrophosphate is a fine white, acidic powder. It is insoluble in water, but soluble in dilute hydrochloric and nitric acid. The pH of a 1% solution of calcium acid pyrophosphate in water is about 2-4.

The chemical mode of action for calcium acid pyrophosphate is as a leavening acid. CAPP reacts chemically in the leavening system with a base, such as sodium bicarbonate. This produces carbon dioxide gas, which provides the leavening, or raising, action in the baked goods.

Calcium Acid Pyrophosphate is not considered a hazardous material for transportation or disposal purposes. Additional toxicological information is presented in the Material Safety Data Sheet (MSDS), which is being sent with this document.

(10) Material Safety Data Sheet (MSDS) Calcium Acid Pyrophosphate provides the requested safety information. (See attached)

(11) REFERENCES:

Branen, A.L, Davidson, P.M., Salminen, S., and Thorngate III, J.H., 2002 (eds.) **Food Additives** (2nd ed.) New York: Marcel Dekker.

Molins, R.A. 1991. Phosphates in Food, Boca Raton FL CRC Press Inc.

Toy, D.F. and Walsh E.N. 1987 **Phosphorus Chemistry in Everyday Living;** Washington DC American Chemical Society.

Van Wazer, J.R. 1961. **Food and Dentrifice Applications**. Chapter in: Phosphorus and its Compounds. Volume II. Interscience Publishers Inc.

(12) PETITION JUSTIFICATION STATEMENT:

As stated above, this petition requests that Calcium Acid Pyrophosphate be added to the National List "for use as a leavening agent" in baked goods. For some applications, CAPP provides a "low sodium" alternative to Sodium Acid Pyrophosphate (CAS # 7758–16–9) which is already on "The National List of Allowed and Prohibited Substances**"** for use as a leavening agent.

Calcium Acid Pyrophosphate is widely recognized and approved as a food ingredient in the international community. The countries or communities that have specific approvals for use of CAPP in foods include:

- The United States of America (FDA, & USDA)
- The European Commission (European Food Safety Authority)
- The Ministry of Health and Welfare of Japan
- The United Nations' World Health Organization and Food and Agriculture Organization (JECFA - Joint FAO/WHO Expert Committee on Food Additives)

Because of the importance of the use of Calcium Acid Pyrophosphate in the conventional food market as a low sodium leavening agent, it is felt that the organic market could benefit tremendously if this use of Calcium Acid Pyrophosphate is allowed on the National List.

Revised 6/19/09

Material Safety Data Sheet

CAL-RISE (TM)

Date Prepared: 4/25/07 **Supersedes Date: 8/13/04**

1. PRODUCT AND COMPANY DESCRIPTION

Innophos
PO Box 8000
259 Prospect Plains Road
Cranbury NJ 08512-8000

Emergency Phone Numbers:
FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CANUTEC at 613-996-6666 (call collect) or INNOPHOS ECT (Emergency Communication Team) at 615-386-7816.

For Product Information:
(609) 495-2495

Product Status:
FDA regulated use only.

Product Use:
FOOD ADDITIVE.

Chemical Name or Synonym:
CALCIUM PHOSPHATE LEAVENING AGENT

Molecular Formula:
$CaH_2P_2O_7$ and $Ca(H_2PO_4)_2$

Prepared By:
Innophos Regulatory Department, (609) 495-2495.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	WHMIS Hazard	Percentage
CALCIUM ACID PYROPHOSPHATE	14866-19-4	Y	< 75
MONOCALCIUM PHOSPHATE	7758-23-8	Y	> 25

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:
white powder solid, odorless.

Warning Statements:
DANGER! CAUSES EYE BURNS. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION.

B. POTENTIAL HEALTH EFFECTS:

Acute Eye:
May cause burns, permanent damage to the cornea.

Acute Skin:
Skin absorption not likely. May cause irritation.

Acute Inhalation:
May cause upper respiratory tract irritation.

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

Chronic Effects:
This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

4. FIRST AID MEASURES

FIRST AID MEASURES FOR ACCIDENTAL:

Eye Exposure:
Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention.

Skin Exposure:

In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation developes or persists. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

Inhalation:
If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

Ingestion:
If victim is conscious and alert, give 2-3 glasses of water to drink and induce vomiting by touching back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:
Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

NOTES TO PHYSICIAN:
All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

Flash Point:
Not Applicable

Extinguishing Media:
Not combustible. Use extinguishing method suitable for surrounding fire.

Special Fire Fighting Procedures:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards:
Not combustible.

Hazardous Decomposition Materials (Under Fire Conditions):
none known

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:
Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Containment of Spill:
Follow procedure described below under Cleanup and Disposal of Spill.

Cleanup and Disposal of Spill:
Sweep or vacuum up and place in an appropriate closed container (see Section 7: Handling and Storage). Avoid creation of dusty conditions. Clean up residual material by washing area with water and detergent. Collect washings for disposal. DO NOT RETURN MATERIAL TO ITS ORIGINAL CONTAINER.

Environmental and Regulatory Reporting:
Do not flush to drain.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:
Not Available

Handling:
This is a food ingredient intended for human consumption. Keep containers closed when not being used. Avoid breathing dusts or vapors. Avoid direct or prolonged contact with skin and eyes.

Storage:
Store in closed containers. Store in an area that is cool, dry, sanitary, well-ventilated, isolated from all toxic and harmful substances, Expected shelf life if stored at recommended temperatures: 12 months. This product is hygroscopic and tends to cake on storage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Introductory Remarks:
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:
No exposure limits were found for this product or any of its ingredients.

Engineering Controls:
Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

Respiratory Protection:
When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): dust/mist filtering respirator.

Eye/Face Protection:
Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.

Skin Protection:
Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:
Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

(1) Do not use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
(2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
(3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the

business area using the Product Information phone number in Section 1 for its exact specifications.

Physical Appearance:
white powder solid.

Odor:
odorless.

pH:
4.2 at 1 wt/wt%.

Specific Gravity:
Not Available

Water Solubility:
slightly soluble

Melting Point Range:
Not Available

Boiling Point Range:
Not Available

Vapor Pressure:
Not Available

Vapor Density:
Not Available

10. STABILITY AND REACTIVITY

Chemical Stability:
This material is stable under normal handling and storage conditions described in Section 7.

Conditions To Be Avoided:
dusting conditions
extreme heat
extreme humidity

Materials/Chemicals To Be Avoided:
none known

Decomposition Temperature Range:
200 C (392 F)

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal
none known

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:
not applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:
Toxicological Information and Interpretation:
eye - eye irritation, rabbit. Corrosive.

Acute Skin Irritation:
Toxicological Information and Interpretation:
skin - skin irritation, rabbit. Non-irritating. (At 4 hours.).

Acute Dermal Toxicity:
Toxicological Information and Interpretation:
LD50 - lethal dose 50% of test species, 2000 mg/kg, rabbit.

Acute Respiratory Irritation:
No test data found for product.

Acute Inhalation Toxicity:
No test data found for product.

Acute Oral Toxicity:
Toxicological Information and Interpretation:
LD50 - lethal dose 50% of test species, 3986 mg/kg, rat (female).
LD50 - lethal dose 50% of test species, 5000 mg/kg, rat (male).

Chronic Toxicity:
This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

No additional test data found for product.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:
No data found for product.

Chemical Fate Information:
No data found for product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Waste Management options should first consider possible re-use or recycling opportunities. Some provinces have active "Waste Exchange" networks for re-use and recycling of wastes. Contact your local waste management companies to explore available options. All waste management activities must obey local, provincial and federal regulations. Possible disposal methods include the following:

Stabilize and solidify this material with compatible binders. Then place in a secure landfill.

14. TRANSPORTATION INFORMATION

Transportation Status: IMPORTANT! Statements below provide additional data on listed DOT classification.
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

TDG Status:
Shipping Name: NON DANGEROUS

IMO Status:
Shipping Name: NOT REGULATED

IATA Status:
Shipping Name: NOT REGULATED

15. REGULATORY INFORMATION

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	E
CANADA (DSL)	E
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	E
JAPAN (MITI)	E
SOUTH KOREA (KECL)	E

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

Inventory Issues:
This product is excluded from TSCA because it is solely for FDA regulated use.

WHMIS Classification:
E : CORROSIVE MATERIAL

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

National Fire Protection Association Hazard Ratings--NFPA(R):

- **3** Health Hazard Rating--Serious
- **0** Flammability Rating--Minimal
- **0** Instability Rating--Minimal

National Paint & Coating Hazardous Materials Identification System--HMIS(R):

- **3** Health Hazard Rating--Serious
- **0** Flammability Rating--Minimal
- **0** Reactivity Rating--Minimal

Reason for Revisions:
Change and/or addition made to Section 1, Section 2.

Key Legend Information:
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration

TLV - Threshold Limit Value
PEL - Permissable Exposure Limit
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer
ND - Not determined
RPI - INNOPHOS Established Exposure Limits

Disclaimer:
The information herein is given in good faith but no warranty, expressed or implied, is made.

** End of MSDS Document **

ICL Performance Products LP

Material Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY UNDERTAKING

Identification

Product Name: Levona ™
Reference Number: AST10142
Date: October 4, 2006
Synonyms: CAPP, Calcium Dihydrogen Pyrophosphate, Calcium Acid Pyrophosphate, Calcium Dihydrogen Diphosphate

Use of the substance or preparation

Food Ingredient

Company Information::

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

Composition

Substance	CAS No	EC
Calcium Acid Pyrophosphate	14866-19-4	238-933-2
Tricalcium Phosphate	1306-06-5	215-145-7

3. HAZARDS IDENTIFICATION

Classification of the substance/preparation

EC Classification Unknown

Human Health Effects

This product may cause skin, eye and respiratory tract irritation.

Environmental Effects

On the basis of available information, this material is not expected to produce any significant environmental effects when recommended use instructions are followed.

4. FIRST AID MEASURES

General

Likely Routes of Exposure: Skin contact and inhalation. Treatment is symptomatic & supportive.

Eye contact

Avoid contact with eyes. In case of contact with eye, wash with plenty of water. Get medical attention if irritation occurs and persists.

Skin contact

Remove this material from skin with plenty of soap and water. Prolonged contact with dry powder may cause drying or chapping of the skin.

Inhalation

Inhalation of the dust may cause coughing and sneezing. Remove to fresh air immediately. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Ingestion

Never give anything to an unconscious person. If discomfort persists, obtain medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media

Not combustible. Use CO_2, powder or water spray.

Unsuitable extinguishing media

None known.

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

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

Environmental precautions

Small quantities: As general precaution, avoid discharge into the environment.
Large quantities: As general precaution, avoid discharge into the environment.

Methods for cleaning up

In case of spill, sweep, scoop or vacuum and remove. Flush residual spill area with water.

7. HANDLING AND STORAGE

Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing.

Engineering measures

Provide natural or mechanical ventilation to minimize exposure. 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 a cool, dry place to maintain product performance.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit

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

OSHA PEL	ACGIH TLV
15 mg/m3 (total dust) 8-hr TWA	10 mg/m3 (inhalable) 8-hr TWA
5 mg/m3 (respirable) 8-hr TWA	3 mg/m3 (respirable) 8-hr TWA

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 is excessive. 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 EN149.

Hand/skin protection

Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Eye protection

Use good industrial practice to avoid contact. Wear appropriate protective eyeglasses or chemical safety goggles as described in the U.S. OSHA 29 CFR 1910.133 or European Standard EN 166.

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Chemical Formula:	$CaH_2P_2O_7$
Form:	powder
Color:	white
Odor:	none

Important health, safety and environmental information

Solubility in Water:	partly soluble
pH – value (100 g/l) at 20°C:	2 - 4

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.

Conditions to avoid

None known

Materials to avoid

None known

Hazardous decomposition products

None known

11. TOXICOLOGICAL INFORMATION

Laboratory data

ICL Performance Products LP has not conducted toxicity studies with this material and no data was found in a reasonably extensive search of the literature.

12. ECOLOGICAL INFORMATION

Environmental Toxicity

ICL Performance Products LP has not conducted environmental toxicity studies with this product.

Environmental Fate

ICL Performance Products LP has not conducted biodegradation studies with this product.

13. DISPOSAL CONSIDERATIONS

European waste catalog number

Unknown

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 for transportation
ICAO/IATA	Not regulated for transportation
RID/ADR	Not regulated for transportation
Canadian TDG	Not regulated for transportation
U.S. DOT	Not regulated for transportation

15. REGULATORY INFORMATION

EC label

Hazard symbol: Unknown

Chemical Inventory

USA TSCA: Exempt

Additional information

WHMIS Classification: Unknown

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 contains all the information required by the Canadian Controlled Products Regulation.

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

16. OTHER INFORMATION

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	2	0	0	
Suggested HMIS Rating	2	0	0	E E = Safety glasses, gloves, dust respirator

Reason for revision: Update section 2. Supersedes MSDS dated: September 25, 2006
Drafted in accordance with ECC Dir. 2001/58/EC