



# *Material Safety Data Sheet*

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### Identification

Product Name: NUTRIFOS® 088, NUTRIFOS® BC, NUTRIFOS® POWDER  
Reference Number: AST10025  
Date: May 2, 2006

### Use of the ingredient 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

| <u>Substance</u>                  | <u>CAS No.</u> | <u>EINECS No.</u> | <u>Risk Phrases</u> |
|-----------------------------------|----------------|-------------------|---------------------|
| Sodium Tripolyphosphate Anhydrous | 7758-29-4      | 231-838-7         | None                |
| Tetrasodium Pyrophosphate (TSPP)  | 7722-88-5      | 231-767-1         | None                |

## 3. HAZARDS IDENTIFICATION

### Classification of the substance/preparation

EC Classification: None  
Safety Phrase: None

### Human Health Effects

CAUTION!  
MAY CAUSE RESPIRATORY TRACT IRRITATION

EYE CONTACT: No more than slightly irritating based on toxicity studies. The dry powder may cause foreign body irritation in some individuals.

SKIN CONTACT: No more than slightly toxic or slightly irritating based on toxicity studies. Prolonged contact with the dry powder may cause drying or chapping of the skin.

**INHALATION:** This product may cause coughing, chest tightness, runny nose, chest pain, and burning throat.

**INGESTION:** No more than slightly toxic if swallowed based on toxicity tests. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Swallowing large quantities may cause gastrointestinal tract irritation, nausea, vomiting, and diarrhea.

#### **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**

Likely Routes of Exposure: Skin contact and inhalation

#### **Eye Contact**

Immediate first aid is not likely to be required. However, this material can be removed with water. Remove material from eyes, skin and clothing. Wash heavily contaminated clothing before reuse.

#### **Skin contact**

Immediate first aid is not likely to be required. However, this material can be removed with water. Remove material from eyes, skin and clothing. Wash heavily contaminated clothing before reuse.

#### **Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

#### **Ingestion**

Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice

### **5. FIRE FIGHTING MEASURES**

#### **Extinguishing media**

Not combustible. No special requirement.

#### **Unsuitable extinguishable media**

Not combustible. No special requirement.

#### **Exposure hazards**

None known.

#### **Protective equipment**

As a general precaution, firefighters & 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: Avoid discharge into the environment.

Large quantities: Avoid discharge into the environment.

**Method for cleaning up**

In case of spill, sweep, scoop or vacuum and remove and place in containers. If possible, complete cleanup on a dry basis. After all practical dry cleanup has been done, flush residual spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

**7. HANDLING AND STORAGE****Handling:**

Avoid breathing dust.  
Keep container closed.

Use only with adequate ventilation.  
Emptied container retains product residue.

Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**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**

ACGIH TLV 10 mg/m<sup>3</sup> (inhalable) 8-hr TWA, 3 mg/m<sup>3</sup> (respirable) 8-hr TWA  
OSHA PEL 15 mg/m<sup>3</sup> (total dust) 8-hr TWA, 5 mg/m<sup>3</sup> (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.

Sodium tripolyphosphate anhydrous contains tetrasodium pyrophosphate which has the following airborne exposure guidelines:

| <u>State</u>   | <u>Standard</u>           | <u>Limit</u>                                       |
|----------------|---------------------------|--|
| Australia      | Occupation Exposure Limit | 5 mg/m <sup>3</sup> 8-hr. TWA                      |
| Belgium        | Occupation Exposure Limit | 5 mg/m <sup>3</sup> 8-hr. TWA                      |
| Denmark        | Occupation Exposure Limit | 5 mg/m <sup>3</sup> 8-hr. TWA                      |
| Finland        | Occupation Exposure Limit | 5 mg/m <sup>3</sup> 8-hr. TWA, 3 mg/m <sup>3</sup> |
| France         | Occupation Exposure Limit | VME 5 mg/m <sup>3</sup>                            |
| Norway         | Occupation Exposure Limit | 5 mg/m <sup>3</sup> 8-hr. TWA                      |
| Switzerland    | Occupation Exposure Limit | MAK – week 5 mg/m <sup>3</sup>                     |
| United Kingdom | Occupation Exposure Limit | 5 mg/m <sup>3</sup> 8-hr TWA                       |

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United States

Occupation Exposure Limit

5 mg/m<sup>3</sup> 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 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. Refer to OSHA 29 CFR 1910.133 or European Standard EN 149.

### Hand/Skin protection

Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

### Eye protection

This product does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact. Refer to OSHA 29 CFR 1910.133 or European Standard EN166.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General information

|                   |  |
|-------------------|--|
| Chemical Formula: | Na <sub>5</sub> P <sub>3</sub> O <sub>10</sub> |
| Form:             | Granules or powder                             |
| Color:            | White  |
| Odor:             | None   |

### Important health, safety and environmental information

|   |   |
|---|---|
| pH (as a 1% solution @ 25 C):                   | 9.7-10.1  |
| Melting Point @ 760 mm Hg:                      | Begins to melt incongruently @ 552 degrees C;<br>completely melted @ 622 degrees C                                  |
| Bulk Density (lb./cu. ft):                      | Powder - 50-65; granular - 43-52 (medium dense)   |
| Solubility in Water (g/100 g H <sub>2</sub> O): | 16.0 @ 0 degrees C,<br>14.8 @ 25 degrees C,<br>16.7 @ 60 degrees C,<br>22.2 @ 80 degrees C,<br>32.2 @ 100 degrees C |

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**

None known.

**11. TOXICOLOGICAL INFORMATION**

The dry powder may cause foreign body irritation in some individuals. Excessive inhalation of dust may be annoying and can mechanically impede respiration. The high alkalinity of tetrasodium pyrophosphate (TSPP) may cause upper respiratory tract irritation. Prolonged contact with the dry powder may cause drying or chapping of the skin.

**Laboratory data**

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

Oral - rat LD50 - 5,400 mg/kg; practically non-toxic  
Dermal - rabbit LD50 - > 7,940 mg/kg; practically non-toxic  
Eye Irritation - rabbit - 3.3/110.0; slightly irritating  
Skin Irritation - rabbit - 0-0/8.0 (24-hr exp.); not irritating

Rats fed Sodium Tripolyphosphate Anhydrous in their diet for two years exhibited decreased growth, increased kidney/body weight ratios, and kidney changes. No birth defects were noted in rabbits given Sodium Tripolyphosphate Anhydrous orally during pregnancy. No effects were seen on the ability of male and female rats to reproduce when fed Sodium Tripolyphosphate Anhydrous for 3 successive generations. Sodium Tripolyphosphate Anhydrous has generally produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells. Genetic changes were reported in a standard test using yeast cells.

The following component has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Tetrasodium pyrophosphate (a component of sodium tripolyphosphate anhydrous)**

Oral - rat LD50: 3,770 mg/kg; slightly toxic  
Dermal - rabbit LD50: > 7,940 mg/kg; practically nontoxic  
Eye Irritation - rabbit: 43.0/110.0; extremely irritating  
Skin Irritation - rabbit (24-hr exp.): 0.0/8.0; non-irritating

Rats fed tetrasodium pyrophosphate in their diet for four months showed a reduced weight gain, urinary changes, increased organ-to-body weight ratios, and slight kidney damage. No birth defects were reports in rabbits, hamsters, mice or rats given this material orally during pregnancy. Tetrasodium pyrophosphate produced no genetic changes in standard tests using bacterial and yeast 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: 48-hr EC50 Daphnia magna: > 1000 mg/L; Practically Nontoxic

Available toxicity data for similar materials suggest that this material would be practically nontoxic to fish (LC50 or EC50 > 100 mg/L). No definitive algal data was available for this material.

**Environmental fate**

ICL Performance Products LP has not conducted biodegradation studies with this product since when dissolved / hydrolyzed in water it yields completely mineralized materials.

**13. DISPOSAL CONSIDERATIONS**

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**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 for transport |
| ICAO/IATA    | Not regulated for transport |
| RID/ADR      | Not regulated for transport |
| Canadian TDG | Not regulated for transport |
| US DOT       | Not regulated for transport |

**14. REGULATORY INFORMATION**

**EC Label**

None

**Chemical Inventory**

|             |        |
|-------------|--------|
| USA TSCA:   | Listed |
| Canada DSL: | Listed |
| EC:         | Listed |

WHMIS Classification: D2(B) - Materials Causing Other toxic Effects

SARA Hazard Notification

|   |                |
|---|----------------|
| Hazard Categories Under Title III Rules (40 CFR 370): | Immediate      |
| 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.

**16. OTHER INFORMATION**

|                       | <u>Health</u> | <u>Fire</u> | <u>Reactivit</u> |   |
|-----------------------|---------------|-------------|------------------|---|
| Suggested NFPA Rating | 1             | 0           | $\frac{Y}{0}$    |   |
| Suggested HMIS Rating | 1             | 0           | 0                | F |

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F= Safety glasses, synthetic apron,  
gloves and dust respirator

Reason for revision: Revised section 11.

Supersedes MSDS dated: April 21, 2006

Drafted in accordance with ECC Dir 2001/58/EC

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