

# Safety data sheet

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BASF India Ltd Safety data sheet

Date / Revised: 11.08.2006

Product: **Natuphos\* SD Powder**

Version: 1.0

(30041127/SDS\_GEN\_IN/EN)

Date of print 11.11.2008

## 1. Substance/preparation and company identification

### Natuphos\* SD Powder

Use: feed additive(s)

Company:

BASF India Ltd

RBC Mahindra Towers 1st floor, A Wing

Dr. G. M. Bhosale Marg, Worli Mumbai-400 018, INDIA

BASF India Ltd

RBC Mahindra Towers 1st floor, A Wing

Dr. G. M. Bhosale Marg, Worli Mumbai-400 018, INDIA

Telephone: +91 22 566-18000

Telefax number: +91 22 249-50512

Emergency information:

Telephone: +91 22-56132002 / -27681268

## 2. Composition/information on ingredients

Chemical nature

Preparation based on: phytase

Hazardous ingredients

phytase

CAS Number: 37288-11-2

Hazard symbol(s): Xn

R-phrases: 42/43

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

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### 3. Hazard identification

May cause sensitization by inhalation and skin contact.

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### 4. First-aid measures

General advice:

Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention.

Note to physician:

Treatment: Symptomatic treatment (decontamination, vital functions).

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### 5. Fire-fighting measures

Suitable extinguishing media:

water, foam

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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### 6. Accidental release measures

Personal precautions:

Avoid dust formation. Use breathing apparatus if exposed to vapours/dust/aerosol.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

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Methods for cleaning up or taking up:  
For small amounts: Sweep/shovel up.  
For large amounts: Sweep/shovel up.  
Avoid raising dust. Cleaning operations should be carried out only while wearing breathing apparatus. Dispose of absorbed material in accordance with regulations.

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## 7. Handling and storage

### Handling

Protection against fire and explosion:  
Avoid dust formation. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Dust explosion class: Dust explosion class 1 (Kst-value >0 up to 200 bar m s<sup>-1</sup>).

### Storage

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

Protect from temperatures above: 40 °C

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## 8. Exposure controls and personal protection

### Components with workplace control parameters

none

### Personal protective equipment

Respiratory protection:  
Breathing protection if dusts are formed. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

#### Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other  
Supplementary note: The specifications are based on own tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the determined permeation time.

#### Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

#### General safety and hygiene measures:

Do not breathe dust. Avoid contact with skin. Handle in accordance with good industrial hygiene and safety practice.

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## 9. Physical and chemical properties

Form:	powder
Colour:	beige
Odour:	product specific
pH value:	4
Minimum ignition energy:	$\geq 4$ J (approx. 20 °C) The product is capable of dust explosion.
Bulk density:	600 kg/m <sup>3</sup>
Solubility in water:	partly soluble

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## 10. Stability and reactivity

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Hazardous reactions:  
Dust explosion hazard.  
The product is stable if stored and handled as prescribed/indicated.

Hazardous decomposition products:  
No hazardous decomposition products if stored and handled as prescribed/indicated.

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## 11. Toxicological information

### Acute toxicity

*Information on: phytase*  
*Assessment of acute toxicity:*  
*Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation.*  
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*Information on: phytase*  
*LD50 rat (oral): > 2,000 mg/kg*  
*Literature data.*  
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*Information on: phytase*  
*LC50 rat (by inhalation): > 5 mg/l (OECD Guideline 403)*  
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### Irritation

*Information on: phytase*  
*Assessment of irritating effects:*

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*Not irritating to the skin. Not irritating to the eyes. Prolonged contact with the product can result in skin irritation.*

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*Information on: phytase*

*Primary skin irritation rabbit: non-irritant (OECD Guideline 404)*

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*Information on: phytase*

*Primary irritations of the mucous membrane rabbit: non-irritant (OECD Guideline 405)*

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## **Sensitization**

*Information on: phytase*

*Assessment of sensitization:*

*Exposure to respirable aerosols and dusts of various enzymes may cause sensitization of the respiratory tract in predisposed individuals.*

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## **Genetic toxicity**

*Information on: phytase*

*Assessment of mutagenicity:*

*Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.*

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## **12. Ecological information**

### **Ecotoxicity**

*Information on: phytase*

*Assessment of aquatic toxicity:*

*There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.*

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*Information on: phytase*

*Aquatic invertebrates:*

*EC50 (48 h) > 80.7 mg/l, Daphnia magna (OECD Guideline 202, part 1, semistatic)*

*The statement of the toxic effect relates to the analytically determined concentration.*

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*Information on: phytase*

*Microorganisms/Effect on activated sludge:*

*EC20 (30 min) > 1,000 mg/l, activated sludge, domestic (DIN/EN/ISO 8192-OECD 209-88/302/EEC, P. C, aerobic)*

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**Persistence and degradability***Information on: phytase**Assessment biodegradation and elimination (H<sub>2</sub>O):**Readily biodegradable (according to OECD criteria).*  
-----*Information on: phytase**Elimination information:**> 95 % BOD of COD (30 d) (DIN 38409 Part 51) (aerobic, activated sludge, domestic)*  
-----**Additional information**

Other ecotoxicological advice:

At the present state of knowledge, no negative ecological effects are expected.

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**13. Disposal considerations**

Observe national and local legal requirements.

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**14. Transport information****Domestic transport:**

Not classified as a dangerous good under transport regulations

**Sea transport***IMDG*

Not classified as a dangerous good under transport regulations

**Air transport***IATA/ICAO*

Not classified as a dangerous good under transport regulations

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**15. Regulatory information****Regulations of the European union (Labelling)**

Hazard symbol(s)

Xn

Harmful.

R-phrases(s)

R42/43

May cause sensitization by inhalation and skin contact.

S-phrases(s)

S22

Do not breathe dust.

S24

Avoid contact with skin.

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Hazard determining component(s) for labelling: PHYTASE

**Other regulations**

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**16. Other information**

Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 2:

Xn

Harmful.

42/43

May cause sensitization by inhalation and skin contact.

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.