

PRODUCT: OptiPhos[®] 5000 L
OptiPhos[®] 2500 L

DATE: November 2012

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2. HAZARDS IDENTIFICATION

Classification according to Commission Directive 2001/59/EC of 6 August 2001

Classification according to Regulation (EC) No 1272/2008 of December 2008

Hazard symbols:



Harmful

Risk phrases:

May cause sensitization by inhalation.

Signal words:



Danger

Hazard statements:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization

6-phytase

IUB Identification-number: 3.1.3.26

CAS-number: 37288-11-2

Each one gram of OptiPhos[®] 5000 L contains not less than 5000 OTU of 6-phytase.
Each one gram of OptiPhos[®] 2500 L contains not less than 2500 OTU of 6-phytase.

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4. FIRST AID MEASURES

General information

Change soaked clothing.
Remove clothing where dust collected.

After inhalation

When spray fog inhaled, seek medical advice and show the physician the packing or the packing label.

After contact with skin

In case of contact with skin wash off with water.

After contact with eyes

In case of contact with eyes rinse immediately for at least 15 minutes with plenty of water.

After ingestion

No special measures necessary.
Rinse mouth thoroughly with water.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

water
foam

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid dust formulation.
Use personal protective clothing.

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Methods for cleaning up/taking up

Clean equipment with a vacuum cleaner.

Avoid raising dust.

Clean contaminated floors and objects thoroughly, observing environmental regulations.

When picked up, treat material as prescribed under heading "Disposal".

7. HANDLING AND STORAGE

Handling

Hints on safe handling

Avoid the formation and deposition of dust.

Provide exhaust ventilation if dust is formed.

Avoid formulation of aerosols.

Hints for protection against fire and explosion

Take precautionary measures against electrostatic loading.

Avoid formation of dust.

Observe the general rules of industrial fire protection.

Storage

Requirements for storage rooms and vessels

Keep only in the original container.

Further information on storage conditions

Keep container tightly closed, cool and dry.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

General protective measures

Do not inhale dust.

Do not inhale aerosols.

Avoid contact with eyes and skin.

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Hygienic measures

Do not eat, drink or smoke during work time.

Keep away from foodstuffs and beverages.

After worktime and during work intervals the affected skin areas must be thoroughly cleaned.

Respiratory protection: Particle filter half mask, filter P1

Hand protection: Rubber gloves

Eye protection: Safety glasses with side protective shield

Skin protection: Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

<i>Appearance:</i>	Opalescent liquid
<i>Color:</i>	Greenish
<i>Relative density:</i>	1.10 ± 0.05 g/ml
<i>Boiling point:</i>	No applicable information found
<i>Melting point:</i>	No applicable information found
<i>Vapour pressure:</i>	No applicable information found
<i>Boiling point:</i>	No applicable information found

10. STABILITY AND REACTIVITY

Conditions to avoid

Elevated temperatures and humidity and direct sunlight.

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11. TOXICOLOGICAL INFORMATION

Data presented refer to purified phytase fermentation product.

Sub-chronic repeated dose oral toxicity

- *Rats* 90-day-administration at doses of 100 mg/kg, 500 mg/kg and 1000 mg/kg was safe and well tolerated (revealed no abnormalities related to the treatment).

Effects on the respiratory system

Enzymes are considered respiratory sensitizers. Adequate labelling is already provided for the present product. The actual risk will be very small since the additive appears in liquid form.

Acute skin irritation

- *Rabbits* – Primary Irritation Index 0 (negligible) – no skin irritation.

Acute eye irritation

- *Rabbits* – no eye irritation.

Skin sensitization

- *Guinea pigs* – assessed to be not sensitizing.

Genotoxicity including mutagenicity

The additive cannot be considered as a potential mutagenic additive as the results from three mutagenicity tests performed with the purified fermentation product were all negative: Bacterial reverse mutation test; In-vitro Mammalian Chromosomal Aberration Test; Mammalian erythrocyte micronucleus test.

Other types of toxicity

Based on the experience that the strain is safe and the other toxicological studies did not raise any concern, no chronic oral toxicity (including carcinogenicity), reproduction toxicity, teratogenicity studies were performed.

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12. ECOLOGICAL INFORMATION

The enzyme is degraded in the gastro-intestinal tract, and as it is of proteinaceous material any remaining material will further degrade in nature. No accumulation will take place.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local authority regulations.

14. TRANSPORT INFORMATION

Road transport

ADR

Non-hazardous goods

Rail transport

RID

Non-hazardous goods

Inland waterways transport

ADNR

Non-hazardous goods

Marine transport

IMDG/UN

Non-hazardous goods

Air transport

ICAO/IATA-DGR

Non-hazardous goods

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15. REGULATORY INFORMATION

Labeling according to Regulation (EC) No 1272/2008 of the European Parliament and of the Council of December 2008

Signal words



Danger

Hazard statements:

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements - Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P285 In case of inadequate ventilation wear respiratory protection.

Precautionary Statements - Response

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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16. OTHER INFORMATION

The data and information reported in this Material Safety Data Sheet are based on information and studies made by Huvepharma with OphtiPhos® and are only a guide for the user. They respect the actual level of the scientific and technical state of the art. In any case they cannot involve a responsibility of Huvepharma if they are not respected, in particular for the aspects not considered.

We consider correct the reported data. Their application does not exclude the respect of the laws in force in each EU Country.

LIST OF ABBREVIATIONS IN THE MSDS

ACGIH	American Conference of Governmental Industrial Hygienists;
ADR	International Carriage of Dangerous Goods by Road;
CAS Number	Chemical Abstract Service Registry Number;
EC	European Community;
IARC	International Agency for Research on Cancer;
ICAO/IATA	International Civil Aviation Organization/International Air Transport Association;
IMDG	International Maritime Dangerous Goods;
LD₅₀	Lethal dose 50;
NTP	National Toxicology Program;
OSHA	Occupational Safety and Health Administration;
RID	International Carriage of Dangerous Goods by Rail;