BioNutrient Solutions PTY LTD
Carbon Farming Systems®
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Material Safety Data Sheet

Infosafe No™ LPY6E Issue Date : May 2009 ISSUED by BIONUTRI

Product Name : **SEED ACTIVATOR**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	SEED ACTIVATOR
Company Name	BioNutrient Solutions Pty Ltd
Address	Shop 2, Waggamba Square, Lagoon Street Goondiwindi QLD 4390 Australia
Telephone/Fax Number	Tel: (07) 4671 5811 Fax: (07) 4671 0295
Recommended Use	Seed treatment and liquid injection for agricultural use

2. HAZARDS IDENTIFICATION

Hazard Classification	NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. Hazard classification according to the criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.
Risk Phrase(s)	R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrase(s)	S24/25 Avoid contact with skin and eyes. S61 Avoid release to the environment. Refer to special instructions/safety data sheet.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	**Name**	**CAS**	**Proportion**
	Zinc oxide	1314-13-2	0-10 %
	Ingredients determined not to be hazardous.		Balance

4. FIRST AID MEASURES

Inhalation	If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms persist seek medical attention.
Ingestion	DO NOT induce vomiting. Immediately wash mouth out with water. If symptoms persist seek medical attention.
Skin	Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.
Eye	If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.
First Aid Facilities	Eye wash fountain, safety shower and normal washroom facilities.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures appropriate to local circumstances and surrounding environment.
Hazards from Combustion Products	Under fire conditions this product may decompose and emit toxic and/or irritating fumes, smoke and gases including carbon monoxide and carbon dioxide.

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Specific Hazards The product is not combustible, but under fire conditions, the non-aqueous components may decompose and/or burn after the water component evaporates. Containers may rupture/explode under fire-conditions.

Precautions in connection with Fire Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) and full protective clothing to prevent exposure to vapours, fumes and products of combustion. Water spray may be used to cool down heat-exposed containers. If safe to do so, remove containers from path of fire. Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Wear appropriate personal protective equipment and clothing to prevent exposure. Evacuate all unprotected personnel. Stop the leak if safe to do so . Increase ventilation. If possible contain the spill. Collect the material and place into suitable labelled containers for subsequent recycling or disposal. If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations. Dispose of waste according to applicable local and national regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling Avoid inhalation of vapours and mists, and skin or eye contact. In the work environment: wear appropriate protective equipment to prevent exposure. Prevent the creation of vapours or mists in the work atmosphere and ensure adequate ventilation. Keep containers closed when not in use. Practice good personal hygiene, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers closed when not in use. Ensure that storage conditions comply with applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No value is assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC) Australia. As with all chemicals, exposure should be kept to the lowest possible levels. The available exposure limits for ingredients are listed below:

National Occupational Health And Safety Commission (NOHSC), Australia Exposure Standards:

Substance	TWA		STEL	
	ppm	mg/m³	ppm	mg/m³
Zinc oxide(dust)	-	10	-	-
Zinc oxide(Fumes)	-	5	-	10

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Biological Limit Values No biological limit allocated.

Engineering Controls Provide sufficient ventilation to keep airborne levels as low as possible. Where vapours or mists are generated the use of a local exhaust ventilation system is recommended.

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Respiratory Protection	If engineering controls are not effective then an approved respirator with a replaceable vapour/mist filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.
Eye Protection	Safety glasses with side shields or goggles as appropriate should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
Hand Protection	Wear gloves of impervious material such as PVC or nitrile. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
Body Protection	Suitable protective workwear should be worn, e.g. cotton overalls buttoned at neck and wrist. Industrial clothing should conform to the specifications detailed in AS/NZS 2919: Industrial clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown liquid
Odour	Sharp acrid odour
Melting Point	Not available
Boiling Point	Not available
Solubility in Water	Fully miscible
Specific Gravity	1.1 - 1.2 at 26°C
pH Value	6.0-7.0
Vapour Pressure	Not available
Vapour Density (Air=1)	Not available
Flash Point	Not applicable
Flammability	Non-combustible liquid.
Auto-Ignition Temperature	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions of handling and storage.
Conditions to Avoid	Extremes of temperature.
Incompatible Materials	Not available
Hazardous Decomposition Products	Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon monoxide and carbon dioxide.
Hazardous Polymerization	Will not occur.

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11. TOXICOLOGICAL INFORMATION

Toxicology Information	No toxicity data available for this material.
Inhalation	May be irritating to respiratory system.
Ingestion	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
Skin	May be irritating to skin. Skin contact may cause redness, itching and swelling.
Eye	May be irritating to eyes. On eye contact may cause tearing, stinging, blurred vision, and redness.
Chronic Effects	Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Persistence / Degradability	Not available
Mobility	Not available
Environ. Protection	Prevent substance from entering the environment.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations	The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations .

14. TRANSPORT INFORMATION

Transport Information	Not classified as Dangerous Good according to Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. REGULATORY INFORMATION

Regulatory Information	Not Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia. Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).
Poisons Schedule	Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of MSDS	MSDS Creation: May 2009

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