MATERIAL SAFETY DATA SHEET

Product Name: Micromune

1. Product and company identification

Manufacturer: Sanitation World
Delmas
Mpumalanga
South Africa
Telephone No: +27 82 800 9802
Fax No: +27 86 623 6121
Email: pragasen@sanitation-world.com
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2. Composition/Information on ingredients

Product description: An aqueous solution of anaerobic and aerobic microbial bio-supplement for use in sanitation of waste water, septic tanks and pit latrines.

Dangerous ingredients: None

3. Hazards identification

Important hazards: None

4. First aid measures

General Advice: Keep out of the reach of children and store in original containers only
Skin Contact: Wash with water
Eye Contact: Flush with water
Ingestion: Drink water
Inhalation: Remove patient to fresh air. See a doctor if an allergic reaction noticed
Other information: None
Advice to physician: Symptoms and Treatment: No specific symptoms known - no special advice for treatment after contamination with the product.
5. Fire fighting measures

Type of material: Non-combustible liquid.
Extinguishing Media: Water, Foam, Carbon dioxide, etc
Hazardous Decomposition Products: Not applicable.

6. Accidental release measures

Environmental precautions: The eco-tox studies show no negative impact of infiltration of large volumes into drains, surface water, groundwater and soil.
Personal precautions: Respiratory protection and safety goggles are recommended.
Destruction and clean up: Recover as much excess product as possible into suitable containers from the site and the rest wash and clean surface with water.

7. Handling and storage

Handling: Ensure adequate ventilation when handling. Respiratory protection is recommended.
Storage: Stored under cool 10°C and 25°C, dry conditions (preferably 15°C).
Incompatible materials: All alkaline material, broad spectrum fungicides or bactericide.

8. Exposure controls/Personal protection

TLV: None.
Technical measures/precautions: Adequate ventilation.

Personal protection
Respiratory Protection: Respiratory protection is recommended.
Hand protection: The product is not a skin irritant.
Eye Protection: The product may cause slight eye irritation. Safety goggles are recommended.
Skin and body protection: The product is not a skin irritant although an allergic reaction may occur to sensitive skin types.
Hygiene recommendations: Wash hands after contact with the product.

9. Physical and chemical properties

Physical state: Liquid.
Colour: Brown – Yellowish
Odour: Molasses.
pH: 3.5
Density: Not applicable.
Solubility: Glucose carrier is soluble, microbes not soluble.
Solubility in organic solvents: Not applicable
Partition coefficient: Not applicable
Vapour pressure: Not applicable
Boiling point: Not applicable
Melting point: Not applicable
Flash point: Not flammable
Explosive properties: Not explosive
Auto-ignition temp: Not available

10. Stability and reactivity

Hazardous decomposition products: None identified.
Materials to avoid: All fungicides, bactericides and germ sanitizer.
Conditions to avoid: Avoid very low or high temperatures and direct sunlight.

11. Toxicological information

LD<sub>50</sub>: Non-toxic, may result in abdominal pain, nausea, diarrhea.
Local effects: May cause allergic reaction to sensitive persons.
Skin irritant: Does not cause skin irritation.
Eye irritant: May cause slight eye irritation.

12. Ecological information

EC 50 Acute toxicity (Fish): 40ml/L, 96h (US EPA 712-C-96-118)
EC 50 Acute toxicity (Daphnia): 20ml/L, 48h (US EPA 600/4-90/027F)
EC 50 Acute toxicity (Algae): Growth and stimulation Limited toxicity, 72h (OECD 201)
Effects on water plants: Not available
Biodegradability: The carrier is made from glucose which is biodegradable.
Mobility: Immobile
Bio-Accumulation: None

13. Disposal considerations

The product may safely be disposed of in a land-fill.

14. Transport information

There are no transport regulations for this product.
15. Regulatory information

EEC Classification: None
Hazard Symbol / Labelling: None
S-phrases: None
National Regulations: None
Other Regulations: None

16. Other information

The purpose of the above information is to describe the product only in terms of health and safety requirements. The information given should not, therefore, be construed as guaranteeing specific properties or as a specification. Customers should satisfy themselves as to the suitability and completeness of such information for their own particular use.

General enquiries: info@sanitation-world.com