

Bio-Starter

Bio-Starter is a formulation which assists in odour management in waste or wastewater with heavy organic load and/ or oily residues. This formulation is used together with VRM Biologik®'s Bio-Seed in situations where the treated material may contain elements which slow or prevent the establishment of beneficial cultures. Allows development of fermentative cultures regardless of background material.

Warnings: Not for human consumption. If accidental ingestion occurs, call a poison control centre. Do not use this product in any way contrary to this label. Keep away from eyes and exposed skin. If skin or eye contact occur rinse thoroughly with clean water to avoid irritation. Follow all local laws when disposing of this product. Use in a well-ventilated area. This product has a strong fermentative odour which dissipates quickly after use.

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THE LABEL

Ingredients: Syrup, yeast, soap, food grade phosphoric acid, potassium humate, vegetable oil, purified water.

Storage Instructions: Store in a shaded place until ready to use. DO NOT FREEZE. Keep container closed and free of debris when not in use. DO NOT SHAKE. Bio-Starter is a fermented product. Colour and odour may vary during storage.

Product Usage

- Long term/ program-based odour management
- Used with Bio-Seed to help neutralise odours in waste or wastewater where oily residues and difficult substances are present.

Directions for Use

| Application Type | General Application Rate (Product in Litres: Treated Surface Area in m ²) | General Application Rate (Product in Litres: Pond Volume in Litres) | Dilution (Product:Water) | Comments |
|--|---|--|--------------------------|--|
| Regular inoculation to a wastewater stream or pipe | | 1L/day (where flow volume <10,000L/day) 4L/day (where flow volume > 10,000L/ day) | 1:10 | <ul style="list-style-type: none">• Use in 1:1 ratio with Bio-Seed.• Spray by dosing pump or similar metered dosing equipment.• Spray to a quiescent zone (either created or installed by you or naturally occurring) where water flow slows down as it passes through an area of installed media. |
| Collected non-liquid material or area | 1L: 1,000m ² of area to be treated | | 3:100 | <ul style="list-style-type: none">• Spray to the surface of the material being treated.• Use a fine spray if available but do not aerosol. |

| | | | | |
|--------------------------------|--|------------------------------|-------|---|
| | | | | <ul style="list-style-type: none"> • Be aware that proximity of the product to the material being treated is important to the effectiveness of the product – try to ensure even coverage. |
| Wastewater or collected liquid | | 1L: 20,000L of liquid volume | 3:100 | <ul style="list-style-type: none"> • Spray to the surface of the liquid being treated. • Use a coarse spray to ensure carriage to the liquid surface. • Be aware that proximity to the material is important to the effectiveness of the product – try to ensure even coverage. • Give focus to the entry and exit zones for the pond or collection area. • Spray to the banks of a pond or collection zone where liquid may enter or collect. • Look for deposition zones in the water and ensure coverage of these areas. |



SAFETY DATA SHEET

VRM® Bio-Starter

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------|--|
| Product Identifier | : 011111 |
| WHMIS Classification | : N/A |
| Product Use | : Treatment Plant & Septic Tank Starter, Microbial Augmentation, Bio-Mass Starter. |
| Manufacturer's Name | : VRM Biologik Pty Ltd |
| Street Address | : 22 Reward Crescent, Bohle, Queensland 4818 Australia |
| Phone | : +61 7 4774 6337 |
| Date Prepared | : 31 January 2023 |

2. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | % | CAS Number | LD50 of Ingredient | LC50 of Ingredient |
|------------------|-------|------------|--------------------|--------------------|
| Purified Water | 93.95 | 7732-18-5 | N/A | N/A |
| Syrup | 5.0 | 68425-17-2 | N/A | N/A |
| Phosphoric Acid | 0.5 | 7664-38-2 | N/A | N/A |
| Vegetable Oil | 0.4 | 84681-71-0 | N/A | N/A |
| Potassium Humate | 0.1 | 68514-28-3 | N/A | N/A |
| Yeast | 0.05 | 8013-01-2 | N/A | N/A |

3. HAZARDS IDENTIFICATION

| | |
|------------------------------|-------|
| Poisons Schedule (Australia) | : N/A |
| Hazard Categories | : N/A |
| Pictograms | : N/A |
| Signal Word | : N/A |
| Hazard Statements | : N/A |

4. FIRST AID MEASURES

| Contact Point | Detrimental Results | First Aid Measures |
|---------------|---|--|
| Eye Contact: | May result in mild irritation. Avoid contact with water - based contact lenses. | Rinse with water for at least 15 minutes. |
| Skin Contact: | None at prepared dilutions. | N/A |
| Ingestion: | May cause nausea if swallowed. | Give water to drink, do not induce vomiting. |
| Inhalation: | None at prepared dilutions. Note: intentional concentration and inhalation of vapours may be harmful. | Remove victim to open and ventilated area. |



5. FIRE FIGHTING MEASURES

| | |
|--|-----------------|
| Flammable Limits | : Non-Flammable |
| Means of Extinction | : N/A |
| Flash Point (Degrees C) | : N/A |
| Upper Flammable Limit (% by volume) | : N/A |
| Lower Flammable Limit (% by volume) | : N/A |
| Auto Ignition Temperature (Degrees C) | : N/A |
| Explosion Data - Sensitivity to Impact | : N/A |
| Explosion Data - Sensitivity to Static Discharge | : N/A |
| Hazardous Combustion Products | : N/A |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------|--|
| Emergency Procedures | : Nil |
| Clean Up Procedures | : Wash area with water to prevent stickiness. |
| Waste Disposal Information | : Dispose to sewer or with composted material. |

7. HANDLING AND STORAGE

| | |
|-------------------------------|--|
| Handling | : Avoid excessive shaking. Vent storage containers during transport. |
| Precautions For Safe Handling | : None |
| Storage | : Store away from excessive heat |

8. EXPOSURE CONTROL / PERSONAL PROTECTION

| | |
|---------------------------|--|
| Exposure Limits | : N/A |
| Respiratory Protection | : Exercise caution when concentration of vapour is possible. |
| Ventilation | : Exercise caution when concentration of vapour is possible. |
| Protective Gloves | : Rubber / Plastic Gloves recommended. |
| Eye Protection | : None at prepared dilutions. |
| Other Protective Measures | : None at prepared dilutions. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------------|--------------------------------------|
| Physical State | : Liquid |
| Odour and Appearance | : Brown Colour / Fermented Fragrance |
| Odour Threshold | : N/A |
| Specific Gravity (H ₂ O=1) | : 1 (Water) |
| Vapour Density (Air=1) | : As Water |
| Vapour Pressure (mmHg) | : As Water |
| Evaporation Rate: (Butyl Acetate=1) | : As Water |
| Boiling Point (degrees C) | : 100 |
| Freezing Point (degrees C) | : 0 |
| pH | : 3.1 - 3.8 |
| Coefficient of Water/Oil Distribution | : N/A |
| Solubility In Water | : Liquid Soluble |
| Percent Volatile By Volume | : < 2% |



10. STABILITY AND REACTIVITY DATA

| | |
|----------------------------------|--|
| Stability | : Alcohol be released when sprayed as aerosol. |
| Conditions To Avoid | : Excessive direct heat may damage product. |
| Materials To Avoid | : Contact with strong alkali products may result in exothermic reaction. |
| Hazardous Decomposition Products | : None |
| Hazardous Polymerisation | : None |
| Conditions To Avoid | : Excessive direct heat may damage product. Avoid inhalation of concentrated vapour. |

11. TOXICOLOGICAL INFORMATION

| | |
|-----------------------------|-------|
| Effects of Acute Exposure | : N/A |
| Effects of Chronic Exposure | : N/A |

Irritancy of Product

| | |
|---------------------------|-------|
| Skin Sensitisation | : N/A |
| Respiratory Sensitisation | : N/A |
| Carcinogenicity-IARC | : N/A |
| Carcinogenicity-ACGIH | : N/A |
| Reproductive Toxicity | : N/A |
| Teratogenicity | : N/A |
| Embrototoxicity | : N/A |
| Mutagenicity | : N/A |

12. ECOLOGICAL INFORMATION

| | |
|-------------------------------|-------|
| Ecotoxicity | : Nil |
| Persistence and Degradability | : Nil |
| Mobility | : Nil |
| Other Adverse Effects | : Nil |
| Bioaccumulation potential | : Nil |
| Environmental Fate | : Nil |
| Environmental Impact | : Nil |

13. DISPOSAL CONSIDERATIONS

| | |
|-----------------------------------|---|
| General Information | : Dispose via sewer or with composted material. |
| Special Precautions for Land Fill | : Recycle container where possible. |



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14. TRANSPORT INFORMATION

LAND TRANSPORT

Proper Shipping Name : VRM® Bio-Starter
Class : Non-hazardous
Subsidiary Risk(s) : Nil
EPG : N/A
UN Number : N/A
Hazchem : N/A
Pack Group : N/A
Special Precautions for user : Nil

SEA TRANSPORT

Proper Shipping Name : VRM® Bio-Starter
Class : Non-hazardous
Subsidiary Risk(s) : Nil
UN Number : N/A
Hazchem : N/A
Pack Group : N/A

15. REGULATORY INFORMATION

Poisons Schedule : No Poisons Schedule number allocated

16. OTHER INFORMATION

For information on appropriate emergency procedures, seek medical advice.

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