

Bio-Defender® (Animal Husbandry)

Bio-Defender® (Animal Husbandry) is a formulation that stimulates biological reactions responsible for digestion of organic residues and the direct neutralising and digestion of key odour substances which cause stress and secondary issues in intensive animal growing situations. This product also balances the ecosystem to enable sustainable management of fungal blooms. Stimulates digestion of hydrogen sulphide and ammonia.

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, fruit, lemongrass 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-Defender® (Animal Husbandry) is a fermented product. Colour and odour may vary during storage.

Product Usage

- Designed for use in intensive animal growing situations (including poultry, cattle feedlots and piggeries).

Directions for Use

| Application | Application Timing | Application Rate (Litres per 1000m ² of building floor space) | Dilution Rate (Product:Water) | Comments |
|-------------------------|---------------------------------|--|-------------------------------|--|
| Rearing Sheds and Barns | Continuous intermittent misting | 1L/ day | 1:1000 | <ul style="list-style-type: none">• Apply as a fine mist or fog to the space surrounding confined animals and organic residue collection areas.• Preferred dosing interval is 1-3 minutes per hour during daylight. Manual applications on farm |

| | | | | |
|--|--|--|--|---|
| | | | | <p>occur once daily or as required.</p> <ul style="list-style-type: none">• For external applications, deliver in afternoon sun in calm conditions. |
|--|--|--|--|---|



SAFETY DATA SHEET

VRM Prot3ct Bio-defender® (Animal Husbandry)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------|--|
| Product Identifier | : 280214PBAH |
| WHMIS Classification | : N/A |
| Product Use | : Probiotic odour and disease management |
| Manufacturer's Name | : VRM Biologik Pty Ltd |
| Street Address | : 22 Reward Crescent, Bohle, Queensland 4818 Australia |
| Phone | : +61 7 4774 6337 |
| Date Prepared | : 16 September 2019 |

2. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | % | CAS Number | LD50 of Ingredient | LC50 of Ingredient |
|------------------|-------|------------|--------------------|--------------------|
| Purified Water | 94.04 | 7732-18-5 | N/A | N/A |
| Syrup | 5.0 | 91722-22-4 | N/A | N/A |
| Soap | 0.4 | N/A | N/A | N/A |
| Phosphoric Acid | 0.25 | 7664-38-1 | N/A | N/A |
| Vegetable Oil | 0.2 | 84681-71-0 | N/A | N/A |
| Potassium Humate | 0.05 | 68514-28-3 | N/A | N/A |
| Yeast | 0.05 | 8013-01-2 | N/A | N/A |
| Lemongrass Oil | 0.009 | 8007-02-1 | N/A | N/A |
| Citric Acid | 0.001 | 77-92-9 | 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 : | Prolonged contact with concentrated liquid. May result in dryness and irritation of sensitive skin. | 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, avoid excessive shaking, vent storage containers during transport. |

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 | : Safety Glasses recommended for prolonged contact with concentrated liquid (liquid is low pH) / |
| Other Protective Measures | : Avoid Inhalation of concentrated vapour. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------------|---|
| Physical State | : Liquid |
| Odour and Appearance | : Golden Brown Colour / Fruit Fragrance |
| Odour Threshold | : N/A |
| Specific Gravity (H ₂ O=1) | : 1.05 |
| Vapour Density (Air=1) | : As Water |
| Vapour Pressure (mmHg) | : As Water |
| Evaporation Rate: (Butyl Acetate=1) | : As Water |
| Boiling Point (degrees C) | : 100 degrees Celsius |
| Freezing Point (degrees C) | : 0 degrees Celsius |
| 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 | : Some volatiles may be released when sprayed as aerosol. |
| Conditions To Avoid | : Excessive direct heat may damage product. Avoid Inhalation of concentrated vapour. |
| Materials To Avoid | : Contact with Strong Alkali products may result in exothermic reaction. |
| Hazardous Decomposition Products | : None |
| Hazardous Polymerisation | : None |

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 |
| Embryotoxicity | : 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 to sewer or with composted material. |
| Special Precautions for Landfill | : Recycle container where possible. |



14. TRANSPORT INFORMATION

LAND TRANSPORT

| | |
|------------------------------|--|
| Proper Shipping Name | : VRM prot3ct bio-defender® (Animal Husbandry) |
| 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 prot3ct bio-defender® (Animal Husbandry) |
| 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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