Focused on Specialty markets

HydroForce

Bio-Blast WSP

Biological Pond Treatment

Product Overview

HydroForce Bio-Blast WSP is a multi-purpose product specifically designed for treatment of waste, water, ponds, lakes and irrigation dam applications. HydroForce Bio-Blast WSP is a unique microbially based blend, containing 5 billion bacteria for the degradation of organic debris, odours, and sediment in ponds, lakes and open water bodies.

HydroForce Bio-Blast improves clarity and odour in water bodies and ties up nutrients within water to assist in the prevention of algal growth.

Key Features

- Unique microbial based blend containing 5 billion bacteria, specifically designed for waste water, ponds, lakes and irrigation dam remediation.
- Ideal for improving water clarity and odour in water bodies.
- Breaks down sludge within the water body.
- Ties up nutrients within the water body.
- Assists with the prevention of algal growth.
- Available in an easy to use and disperse water soluble packet which breaks down upon entry to the water. No scooping or measuring is required.

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SPECIALTY PRODUCTS

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HydroForce Bio-Blast WSP – Application Details

- Keep container closed when not in use
- Do not under treat water; overtreating is safe and will yield optimal results
- To calculate total litres to be treated: Length x Width x Depth x 1000 = Total Litres

Situation	Application Interval	Treatment Rate	Comments
Waste water, ponds, lakes and irrigation dams to improve water clarity, organic debris, reduce potential for algal blooms via nutrient reduction	**Initial Applications:** Every 7-14 day **Maintenance Applications:** Monthly	Use 1 water soluble packet per 450,000L of water OR Use 10 water soluble packets per 1 hectare (10,000m^2) of water body surface area	Deploy water soluble packets evenly throughout the surface of water area (near aeration when possible). Apply directly into water when temperatures are above 10^{0}C. **The pouch is water soluble so no scooping or measuring is required.**

Key Calculation Notes:

- How to Calculate Total Litres to be treated;
  > Length (m) x Width (m) x Depth (m) x 1000 = Total Litres

To assist with rate requirements – please request a copy of the HydroForce Bio-Blast Rate Calculator.

Mode of Action of Bio-Blast WSP

Upon introduction to the water, the HydroForce Bio-Blast water-soluble pouches begin to break down and release bacteria in just a matter of seconds. Nutrients in the pond will activate the metabolism of the bacteria, causing them to become vegetative. A vegetative state is an active state in which the bacteria are producing enzymes, consuming organic material, and reproducing.

The bacteria secrete targeted enzymes to break down the types of organic matter contained in sludge into a digestible state. They then proceed to ingest and digest it. HydroForce Bio-Blast has specific strains of bacteria that are selected deliberately with consideration to the specific enzymes they produce. The bacteria within HydroForce Bio-Blast are as follows:

> *Bacillus amyloliquefaciens.* Key role of Enzyme produced: Nitrogen utilisation and reduction, Biodegradation of pond debris.

> *Bacillus megaterium.* Key role of Enzyme produced: Biochemical Oxygen Demand Improvement. Ammonia utilisation.

> *Bacillus subtilis*. Key role of Enzyme produced: Nitrate and Phopshorus utilisation and reduction.

> *Bacillus licheniformis*. Key role of Enzyme produced: Ammonia utilisation and reduction. Dissolved solids reduction.

Odours are reduced as the bacteria consume the organic matter in excess sludge. As the bacteria consume the organic nutrients that also feed the algae, the algae are naturally starved out through competitive exclusion.

Sludge Management in Water Bodies

Sludge is an accumulation of organic matter that settles at the bottom of a pond or other body of water. This organic matter can include decaying plant debris, fish waste, and debris from outside washed in by rainwater.

The largest contributor to accelerated accrual of sludge however is dead algae. Upon application of HydroForce Bio-Blast the bacteria and enzymes they produce consume the organic matter contained in the excess sludge, and the layer is gradually reduced to acceptable and expected levels.

This leads to a reduction in unpleasant odours associated with decaying organic material. As the bacteria's and their enzymes consume the organic nutrients, that also feed the algae, the algae is starved through competitive exclusion.

Maximising performance

> Evenly disperse water soluble packets throughout the water body.

> Apply directly into the water body when temperatures are above 10°C.

> Product may be compatible with herbicides and pesticides, however please check with the manufacturer prior to application. Please be aware that physical compatibility does not guarantee product efficacy.

> Keep container in original packet, with bag tightly sealed.

> 1 water soluble packet will treat 450,000 L of water.

> Avoid application to the water body within 14 days of copper based algaecides.

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