INFORMATION SHEET

Product name
SEWAGE POWDER (SP)
Biological solution for sewage, septic tanks and pit latrine systems

Product range
BACZYME Sustainable Technology

Description
A biodegradable and biologically active product that is used for the bio-augmentation of waste water treatment systems and for environmental bioremediation. The consumer version (500g tub) is used for the treatment of grey water, septic tank and pit latrine systems. The super concentrate + versions are also used as biological ingredients in various cleaning and treatment products by re-formulators. The products improve waste treatment efficiency and operational robustness of the treatment processes.

Product Variants:
This product comes in a ready to use version (BACZYME SP) and a super concentrate form (BACZYME SP+). Both the RFU and + versions are available as liquids or powders to support a wide range of application requirements. The liquid versions are stabilized microbes in spore form and the powders are nutrient fortified to enhance biological activity.

Ready to use products
- 500g tub with scoop **(SP)**
- 25 L drum **(RFU LIQUID)**
- 1kg x 25 bags boxed **(RFU POWDER)**

Super Concentrate Products
- 25 L drum **(LIQUID)**
- 1kg x 25 bags boxed **(SEWAGE POWDER)**

Bacterial Consortium:
- B006- Bacillus cereus strain B006
- D005- Bacillus cereus strain D005
- D014- Bacillus subtilis strain D014

Specifications:

SEWAGE RFU

Colour	Blue	Brown
Appearance	Liquid	Powder
Smell	Acidic	Natural
pH (Dissolution)	4.7 ± 0.1	6.0± 0.5
Cell concentration	1 x10^{8} CFU.ml^{-1}	1 x10^{8} CFU.ml^{-1}

SEWAGE RFU+

Colour	Blue	Brown
Appearance	Liquid	Powder
Smell	Acidic	Natural
pH (Dissolution)	4.7 ± 0.1	6.0± 0.5
Cell concentration	1 x10^{9} CFU.ml^{-1}	1 x10^{9} CFU.ml^{-1}

Application:
The bacteria in the product removes wastes, breaks down organic solids and controls odour in wastewater treatment and environmental bio-remediation applications.

Solids breakdown	✓
Treats COD	✓
Removes Phosphate	✓
Removes Nitrate	✓
Removes Nitrite	✓
Removes Ammonium	✓

Application:
The powder derivatives of this product incorporate activation nutrients which aids in growth of the bacteria under nutrient deficient or nutrient lanced conditions.

As a ready to use product applications include:
- The biological treatment of sewage waste
- The biological treatment of effluents generated by industry
- Septic tank treatment
- Grey-water system treatment
- Waterless and portable toilets
- Rehabilitation and treatment of pit latrine systems

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As a ready to use product applications include:
- Incorporation as a biological ingredient in proprietary formulations by re-formulators
- For heavily contaminated systems as a seeding or booster treatment

Ongoing use of the product correctly will have the following benefits:
- Odour control
- Bioremediation of the waste
- Lowers tendency for waste to leach to ground water and cause contamination
- Reduces unpleasant odour
- Less growth and transfer of pathogenic disease causing organisms
- Reduced environmental pollution
- With the solids being liquefied and then digested there is lower requirement for sludge pump-out
- Reduced propensity for flies

Dosage:

SEWAGE POWDER RFU (500g tub with scoop):
Add 1 scoop daily, directly into system or convenient entry point, of grey water or septic tank systems.

Add 1 scoop daily ideally mixed with 1L of water (where available) to functional pit latrine system. Refer to our pit latrine treatment guideline (available on request).

SEWAGE LIQUID RFU:
Mix contents well. Use 1-5 L per one mega litre of wastewater per day. The product should ideally be dosed continuously by dosing system or where not possible manually but as frequently as feasible by the user. Always maintain effective dosage into treatment system.

Powder:
For liquid wastes, add 1- 5 kg per mega litre as per procedure for BAC SP RFU Liquid.

For bio-remediation of solid waste add 1- 5 kg per cubic metre. Disperse evenly across waste to be treated. In some cases, additives such as peat, sawdust or clay are used to improve dispersion. Monitor and repeat dose monthly or as deemed necessary, to complete the bioremediation process.

RFU + Liquid and Powder:
These products are included at 10% as an active biological formulation ingredient to produce a ready to use product. Always maintain effective dosage.

Usage considerations::
Control pH ~ 7.00
Ensure that treatment system is properly mixed.
Ensure system has sufficient retention time for the waste load to be treated. Ensure sufficient oxygen supply.
In solids applications maintain moisture around 30%.

Do not use non-biodegradable detergents.
Do not use anti-bacterial or biocidal (kill the good bacteria) products, as this will prevent the treatment from working.
Do not use any harsh chemicals such as strong acids or bases as this will kill the bacteria. All the ingredients for effective bioremediation are included in the product.

Safety:
- ✓ Non-hazardous.
- ✓ Non-carcinogenic.
- ✓ Non-genetically modified.
- ✓ Non-pathogenic

Key Features:
- ✓ Ingredients Readily Biodegradable (OECD 301)
- ✓ Biological active (contains active natural bacteria)
- ✓ Compatible and enhances water treatment and water re-use systems
- ✓ Packaging minimized, re-useable and recyclable
- ✓ Long lasting

Designed to produce enzymes on demand:
Active natural bacteria incorporated into the product produce waste degrading enzymes:

Proteases	✓
Lipases	✓
Cellulases	✓
Amylases	✓
Urease	✓
Xylanase	✓

Stability:
The product is stable for 2 years when stored between 4 and 40oC. Due to the use of natural colorants, color changes may occur.

*MSDS available on request

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