

## BIO CLEANING SOLUTIONS

### Blue Mac Bio Portable Toilet Fluid - RTU

Proprietary Blend Probiotic Formulation for use in Portable Toilet Systems (**Formaldehyde free**)

#### IMPORTANT NOTICE

**Green Worx CS contends that this product is manufactured according to and conforms to the terms and conditions as stipulated in SABS/TC 1006/SC 02 "Detergents, soaps, cleaners, degreasers and oil spill dispersants and absorbents" including SANS CD 1604ED1.1:Biologically enhanced cleaning and degreasing products.**



#### BLUE MAC BIO Portable Toilet Fluid

is designed for use in portable toilets including: -

- Construction site toilets,
- Caravans, boats, trains and busses
- Marine vessels,
- VIP portable mobile toilets
- Underground portable toilet in mines
- Events (music, sport)

To accelerate the degradation of organic matter and provide

exceptional bacteriostatic and disinfectant properties for these applications.

By harnessing nature's own technologies and importantly moving away from harsh, dangerous and health risk chemicals such as **formaldehyde derivatives**. Green Worx Cleaning Solutions offers a natural organic biological solution that is eco-friendly, safe, holds no health risk to both the user of a toilet or the manufacturer and service agent to portable toilets.

Green Worx Cleaning Solutions offers new ground breaking patented environmentally friendly pre-treat water technology to replace and outperform any wetting agent. This environmentally friendly additive is a solvent, ammonia and glycol free replacement product where powerful wetting performance is required for cleaning and dispersion of particles into solutions or suspensions; it prevents flocking and agglomeration; The additive product performs extremely well and is a replacement for conventional wetting agents to increase environmental acceptance; This new water technology is primarily used in the pre-treatment of water. The quality of water and its properties are manipulated in an entirely natural way. This natural product neutralizes the magnetic charges of particles in water thus reducing surface and interfacial tension resulting in:

Increased adhesion of the liquid to a solid particle thus resulting in a powerful wetting agent.

Allows for water and oil-based droplets to break down into finer globules and to stay in suspension for longer, resulting in powerful emulsification.

The addition of this new technology allows for the transfer of our microbes / probiotics into nooks and crannies resulting in a more effective distribution of probiotics for better degradation of organics ensuring more visible cleaning and deodorising power.

#### Product Data:

#### FEATURES

- A selected blend of highly active live bacteria cultures (probiotics).
- Contains a balanced buffer system that secures optimum enzyme activity.
- Cultures are a mixture of anaerobic and aerobic microorganisms.
- High enzyme activity including:
  - **Protease** breaks down proteins (e.g. meat, excreted/secreted proteins) into amino acids
  - **Lipase** breaks down fats/grease into fatty acids & glycerol. If not broken down, fats can go rancid & lead to off-odours & blocked drains/fat grease traps.
  - **Amylase** - starch acts as a glue for dirt – amylases catalyse the break-down of starch into sugars which are then further used as a food source by the bacillus
  - **Cellulase** breaks down cellulosic material
  - **Urease** catalyzes the hydrolysis of urea into break-down products.
  - **Esterase** splits esters into an acid and an alcohol in a chemical reaction with water called hydrolysis. Esters have characteristic odours most of which are pleasant/fruity, however can also include onion/garlic & worse odours
  - **Xylanase** help in breaking down plant cell walls.

What this means – the bacillus use the multitude of enzymes produced to break down the components of malodour & staining to provide microbial cleaning at the smallest level of dirt/contamination.

- Non-volatile and non-corrosive.
- Easy to be handled and to use.
- Good stability and shelf life.

#### TYPICAL BIOLOGICAL/BIOCHEMICAL CHARACTERISTICS:

Minimum CFU count -  $4 \times 10^7$  /ml.

#### PHYSICAL CHARACTERISTICS

Appearance – Dark Blue liquid

pH - 5.5 – 8.5

Odour - Fresh fragrance

Standard packaging - 5 and 25 litres

**BLUE MAC BIO Portable Toilet Fluid** is a sanitation solution that demonstrates superior performance. The toilet fluid exhibits a broad range of degradation capabilities needed for improving septic and waste degradation, cleaning, and odour control and bacteriostatic effects of commonly found bacteria in solid waste.

**BLUE MAC BIO Portable Toilet Fluid** produces rapid degradation of waste in septic systems and cleans surfaces. This disinfectant, bacteriostatic solution is the next generation technology in sanitation with degradation capability superior to the present commercially available formaldehyde blends.

#### Product Benefits:-

**BLUE MAC BIO Portable Toilet Fluid** is designed to provide exceptional performance keeping portable toilets hygienic, clean and the system trouble free:

- The proprietary blend of probiotics as the active ingredient improves system stability and enjoys proven bacteriostatic efficacy against E.coli, S.typhi and P. Vulgaris the most common and harmful bacteria found in portable toilets
- The superior surfactant and water additive to the proprietary blend is an effective disinfectant and reduces the frequency of cleaning the holding tank
- Provides long-term odour control by containing the organics that cause bad odour and also eliminates odours due to organic build-up

• **Septic and waste treatment** – **BLUE MAC BIO Portable Toilet Fluid** maintains effective activity in septic systems. Eliminates odours caused by incomplete digestion of malodorous volatile fatty acids.

• **Odour controller** – **BLUE MAC BIO Portable Toilet Fluid** Provides long-term odour control, containing the organics that cause odours and prevents the return of odour-causing compounds for up to 5 – 7 days prior to emptying.

• **Wastewater Treatment Plant** – Independent laboratory studies have proven that BLUE MAC BIO Portable Toilet Fluid has exceptional bacteriostatic performance against E. coli and Total Coliforms and has demonstrated effective antiseptic cleaning activity in septic systems (Waste water sludge). The active ingredient first has a negative and sterilised impact on

the bacteriological growth in the toilet bucket and after mixing into the Wastewater Treatment Plant it reacts as a carbon source to the micro-organism for biological break down.

**Product Features:-**

- Proven bacteriostatic efficacy against E-coli, S.typhi and P. Vulgaris as per SABS SANS test method 5730
- A stable propriety blend of probiotics is environmentally friendly and totally biodegradable (independent laboratory analysis)
- Provides a wide range of degradation capabilities
- Ability to work under aerobic and anaerobic conditions
- An effective antiseptic cleaning activity in wastewater sludge

**Health benefits:**

An eco-friendly product with no phosphates, no harsh solvents, no chlorine bleaches, no abrasive substances, food based colorants, no toxic substances, pH neutral, non-pathogenic. Safer alternative to harsh chemical agents. Awarded with ECO certificate.

**Environmental benefits:**

Low VOC's, easily biodegradable, minimum impact on aquatic life, recyclable packaging materials, no animal testing. Safe for use in houses with septic and other types of onsite sewerage system.

**Instructions for use** for 20 L tank, for bigger sizes increase doses proportionally:

1. Toilets with flush tanks: Pour 15-25 ml into a flush tank and fill with water. Repeat after each dumping of tank.
2. Toilets without flush tanks: Pour 15-25 ml into a holding tank and 2 liters of water. Repeat after each dumping of tank.
3. Portable Toilets with industrial sized holding tanks – pour 20 liter water into holding tank add 500 ml Blue Mac Bio per holding tank – you are good to go for 7 days before dumping contents
4. VIP trailer Toilets with a 120 liter waste tank – add 1.5 liter Blue Mac Bio

Ingredients: Proprietary formulation containing viable probiotic microorganisms cultures (class 1 “non-pathogenic”).

**Product Availability: -**

**BLUE MAC BIO Portable Toilet Fluid** is available in 5 and 25 litre containers.

**Product Comparison**

**Conventional Formaldehyde Products vs. BLUE MAC BIO Portable Toilet Fluid**

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|---|--|
| Formaldehyde is a VOC which masks the foul odour  | <b>BLUE MAC BIO</b> will remove the organics that cause the odour  |
| As a VOC formaldehyde is over powering and often causes breathing problems, shortness of breath and will often bring tears to your eyes when in the confined space of a portable toilet | <b>BLUE MAC BIO</b> has a pleasant fresh fragrance that provides a refreshing environment to be in.  |
| Within a short while the fragrance combined with effluent odour makes it unbearable for visitors to the portable toilet   | <b>BLUE MAC BIO</b> leaves the toilet smelling fresh and clean for up-to 7 days  |
| Formaldehyde has a short lifespan   | <b>BLUE MAC BIO</b> will remain effective for the duration required in a portable toilet 5 – 7 days prior to emptying (total days to emptying as specified by municipal regulations) |
| Formaldehyde is inexpensive. However this cost can be increased due to its short lifespan and being ineffectual when diluted more than recommended                                      | <b>BLUE MAC BIO</b> cost per litre is the same as that of formaldehyde yet is more cost effective  |
| Average usage is 1 liter per emptying   | Same   |
| Formaldehyde is considered a health risk in many developed countries and by the World Health Organization (well documented) It is also banned in most developed countries               | <b>BLUE MAC BIO</b> is a natural, biodegradable, organic food source combined with a surfactant, fresh fragrance and food colorant   |
| Formaldehyde is a harsh chemical that will destroy the natural bacteria in healthy sewerage systems   | <b>BLUE MAC BIO</b> enhances eco systems   |
| Not been proven by local suppliers of Formaldehyde  | <b>BLUE MAC BIO</b> • Proven bacteriostatic efficacy against E-coli, S.typhi and P. Vulgaris as per SABS SANS test method 5730   |
| Formaldehyde is at best a masking agent and a definitive VOC  | <b>BLUE MAC BIO</b> has the ability to work under aerobic and anaerobic conditions   |
| Formaldehyde beaks down the systems biological stability  | <b>BLUE MAC BIO</b> improves the system's biological stability   |

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|---|---|
| Formaldehyde cannot make the same claims as it is not a Bio Cleaning Solution | <b>BLUE MAC BIO is a Bio Cleaning Solution</b>  |
| Formaldehyde has been used for years with no SABS standard                    | <b>BLUE MAC BIO</b> is a new innovation which means that even though Formaldehyde has been around for a long time <b>BLUE MAC BIO is the right product to use</b> |

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Manufactured and supplied by **Green Worx Cleaning Solutions**

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 +27 11 708 6626   
 info@greenworx.eco   
 www.greenworx.eco