

## BIO CLEANING SOLUTIONS

*Bio Tech GTX 10 FF - Zero Flush*  
*Application for - Deodorising Cleaning and Sanitising*

**Multipurpose Probiotic cleaning, deodorising, descaling and sanitising solution**  
**Non-toxic, non-corrosive, multipurpose digester with odour eliminator**

### 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.**



**Bio Tech GTX 10 FF Zero Flush** is a proprietary blend formulation of surfactant-based cleaners with a consortium of highly active Probiotic spores and enzymes that will effectively degrade residual organics on the urinal wall, inside the toilet bowl and other hard surfaces. Organic deposits in nooks and crevices are often the result of common stains that will easily be eliminated. These deposits lead to stains and malodours. **Bio Tech GTX 10 FF Zero Flush** effectively degrades

organics resulting in odour control and stain removal, while breaking down uric acid crystals in the drain line and clearing it of blockages.

Bio Tech 10 X FF Zero-Flush is a 100% environmentally friendly toilet & urinal water neutraliser made from multi-stain bacillus / Probiotic spores, a blend of 6 specific strains of bacillus bacteria / probiotics plus 7 enzymes and plant-based surfactants. The combination of these bacteria and enzymes allows for just one spray of Bio Tech Zero-Flush in your toilet or urinal bowl to neutralise any malodour from urine leaving behind a fresh fragrance. You can save up to 6800L of clean water with every 500ml bottle of Bio Tech Zero-Flush.

### Disinfectant Properties:

A recent challenge test comparing **Bio Tech GTX 10 FF Zero Flush** to leading sanitisers found that **Bio Tech GTX 10 FF Zero Flush** was more effective in eradicating harmful pathogens. All tests were conducted by a SANAS accredited micro-laboratory, **(a full copy is available on request)**.

**Bio Tech GTX 10 FF Zero Flush eliminates pathogens.** Industry standards indicate a five-minute kill time as the quickest time a sanitiser (QAC-based) is purported to kill the most common hygiene microorganisms; S. aureus, E. coli and P. aeruginosa. From a hygiene point of view the need is to sanitise and continue working. Nowadays, sanitizer manufactures

are heading towards 1 minute kill time, i.e. the quicker the sanitizer kills bugs, the sooner you'll start with your work – however in a toilet and urinal this is not always required.

With Probiotic-based products, it's different as these are live microorganisms that need to compete with other microorganisms for the same food sources hence longer contact times are required. The pattern that probiotics/bacillus uses (as seen in the study) to eradicate or out compete other organisms showed to be due to its morphological structure. That is, where it grows (multiplies), other microorganisms will move away from that site of the food source. Since it has a larger morphological structure than other organisms (competing against) it 'sort of' creates a zone of inhibition of growth of other microorganisms (morphological inhibition) hence, we get fewer numbers of other microorganisms surviving but more bacillus rendering a disinfectant property.

| PRODUCT FEATURES & CHARACTERISTICS   |  |
|--|--|
| Features   | Characteristics  |
| <ul style="list-style-type: none"> <li>• A selected blend of highly active live probiotic/bacteria cultures</li> <li>• Contains a balanced buffer system that secures optimum enzyme activity</li> <li>• Cultures are a mixture of anaerobic and aerobic microorganisms</li> <li>• Displays high enzyme activity including protease, amylase, cellulose and lipase</li> <li>• Is non-volatile and non-corrosive</li> <li>• Is easy to handle and to use</li> <li>• Displays good stability and shelf life</li> </ul> | <p><i>Typical Biological/Probiotic Characteristics:</i></p> <ul style="list-style-type: none"> <li>• Concentrate – <math>1 \times 10^9</math> CFU/ml</li> <li>• Diluted 1:10 (1.0 l concentrate to 10 litres water – <math>1 \times 10^8</math> CFU/ml)</li> <li>• pH 5.5 – 8.5</li> </ul> <p><i>Physical Characteristics:</i></p> <ul style="list-style-type: none"> <li>• Appearance: Opaque liquid</li> <li>• Odour: Fresh fragrance</li> <li>• Standard packaging: 500 ml, 5 and 25l plastic containers</li> </ul> |

#### Optimum conditions for use:

Probiotic/Bacteria and enzymes in **Bio Tech GTX 10 FF Zero Flush** perform with a pH range of 5.5 to 8.5 with the optimum near pH 7.0. Temperature affects the activity of the working solution and action increases with the rising temperatures up to 49°C. No or little activity can be expected below 5°C.

A recent challenge test comparing **Bio Tech GTX 10 FF Zero Flush** to leading sanitizers found that **Bio Tech GTX 10 FF Zero Flush** was more effective in outperforming harmful pathogens. All tests were conducted by a SANAS accredited micro laboratory – a full copy is available.

**Use in Urinals:** Once you have used the urinal you need not flush – spray one to two squirts of Bio Tech GTX 10 FF Zero Flush into the urinal. You only need to flush once a day. The Bio Tech formulation will neutralise any malodours emitting from the urinal and keep the urinal smelling fresh.

**Use in toilet bowls:** Following the use of a number one or two in a toilet bowl spray one or two squirts into the bowl – no need to flush – only flush when the volume is large – it may also be more beneficial to discard any toilet paper into a sanitation bin for later discarding.

#### PRODUCT CHARACTERISTICS

- **Bacteria Counts** :  $1 \times 10^9$ /ml
- **Bacteria Type** : Bacillus consortium producing the following enzymes:
  - ✓ **Protease** – breaks down proteins (e.g. meat, excreted/secreted proteins) into amino acids
  - ✓ **Lipase** – breaks down fats/grease into fatty acids and glycerol. If not broken down, fats can go rancid and lead to off-odours and 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 and 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 and staining to provide microbial cleaning at the smallest level of dirt/contamination.

## FEATURES

- A selected blend of highly active live probiotic / bacteria cultures.
- contains a balanced buffer system that secures optimum enzyme activity.
- Cultures are a mixture of anaerobic and aerobic microorganisms.
- High enzyme activity including protease, amylase, cellulose and lipase.
- Non-volatile and non-corrosive.
- Easy to be handled and to use.
- Good stability and shelf life.

## Storage and handling:

- Dilute to a ratio of 1:9 for an effective ready to use formulation
- Store in a cool, dry place
- Avoid excessive inhalation
- Wash hands after handling

## Applications:

- Urinals and surrounding area
- Toilet bowls
- Washroom floors
- Basins, baths, showers and surrounding areas

## Formulating to a Ready to Use mixture:

To create a ready to use **Bio Tech GTX 10 FF Zero Flush** please adhere to the following mixing guidelines:

- Mix 100ml **Bio Tech GTX 10 FF Zero Flush** into 1 litre of water
- Spray solution into each urinal or toilet bowl and / or onto the tiles and tile grouting beneath the urinal or toilet bowl daily or as required according to usage
- Leave to air dry

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