



# BIO-TORQ

BIO FILM REMOVER

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BIO-TORQ Biofilm Remover. Floor and hard surface cleaning technology for food contact surfaces.

BIO-TORQ Biofilm Remover is the latest innovation in cleaning technology. The advanced formulation technology for removing greasy soils provides superior, immediate cleaning of surface soils, comparable to industrial-strength floor cleaners and surface cleaners. The bio-enzymatic action penetrates deep into the pores of the surface to attack and remove embedded residual soils.

Aerosolized grease and food spills collect particulate soils contributing to the build-up of grime on kitchen floors. Residual organics collect in the microscopic pores of the surface, cracks, corners, and grout. Floors are not clean as long as these embedded soils remain and detergents alone cannot penetrate these layers of residual grime. The organic deposits pack deep into surface irregularities and can produce malodours and supporting unwanted insects and bacteria.

BIO-TORQ Biofilm Remover removes grime with dual technology unequalled by traditional surfactant chemistry. It combines superior plant-based surfactant technology with bio-enzymatic action. The enzymes contained within BIO-TORQ Biofilm Remover work to break down fats, oils and grease, while also breaking down starches which act as a glue (**Bio-film**), trapping dirt and other organics on the surfaces. This powerful combination provides exceptional ability to break down residual organic soils.

Regular use of BIO-TORQ Biofilm Remover removes layer upon layer of embedded grime, while avoiding the traditional challenge of increasing CFU counts on food contact surfaces by means of bacterial cleaning. Continued use prevents future build-up of organic soil and grime, keeping the floor truly deep-clean, odour-free and controlling potentially harmful microorganisms.

## DATA SHEET

### Benefits

- Specifically designed for cleaning food contact surfaces where traditional bacterial based products cannot be used due to bacterial swab counts.
- Deep-cleans floors and grout by removing the grease and grime that collects in the pores of the floor surface
- Eliminates the greasy floor coating that causes slipperiness
- Improves freshness by controlling odours from residual organics packed into irregular floor surfaces
- Eliminates the need for rinsing after mopping
- Degrades residual organic soils that help support insects and other unwanted pests

### Features

- Specifically selected highly effective enzyme combination to remove fats, grease and starch based stains
- A proprietary inhibitory system that provides excellent product stability
- Readily biodegradable surfactants for improved cleaning
- Product is compatible with existing biological based fat/grease trap treatment products and will ensure higher throughput on the grease traps as the fats/grease will be pre-digested

**Biofilms:**

A biofilm is a community of microorganisms adsorbed to a surface. Microorganisms in biofilms are enclosed in a polymeric matrix consisting of exopolysaccharides, extracellular DNA and proteins. Seconds after a surface (usually metal) is placed in a solution, inorganic and organic molecules adsorb onto the surface. These molecules are attracted mainly by Coulombic forces (see above section), and can adhere very strongly to the surface. This first layer is called the conditioning layer and is necessary for the microorganisms to bind to the surface. These microorganisms then attach reversibly by Van der Waals forces, followed by irreversible adhesion through self-produced attachment structures such as pili or flagella. Biofilms form on solid substrates such as stainless steel. A biofilm's enclosing polymeric matrix offers protection to its microbes, increasing their resistance to detergents and cleaning agents. Biofilms on food processing surfaces can be a biological hazard to food safety. Increased chemical resistance in biofilms can lead to a persistent contamination condition.

**Basic mechanism of enzyme action:**

Enzyme-based cleaners are especially useful for biofilm removal. Bacteria are somewhat difficult to remove with traditional alkaline or acid cleaners. Enzyme cleaners are more effective on biofilms since they work as proteases by breaking down proteins at bacterial attachment sites. They work at maximum efficiency at high pH and at temperatures below 60°C. Enzyme cleaners are an increasingly attractive alternative to traditional chemical cleaners because of biodegradability and other environmental factors, such as reduced wastewater generation and energy savings from using cold water and they are typically less expensive than alkaline or acid cleaners.

**Legislation:**

Please note that in terms of the relevant legislation the Directorate: Food Control administers, the onus is on the person in charge of a food premises to ensure that any substances used are effective and/or does not contaminate the foodstuffs handled on such premises, including Biological and Enzymes. It is important to note that in this regard, the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972) states the following:

2. Prohibition of sale, manufacture or importation of certain articles. —

(1) Subject to the provisions of subsection (2) and section 6, any person shall be guilty of an offence—

(b) if he sells, or manufactures or imports for sale, any foodstuff or cosmetic—

(i) which is contaminated, impure or decayed, or is, or is in terms of any regulation deemed to be, harmful or injurious to human health; or

(c) if he sells, or manufactures or imports for sale, any foodstuff—

(i) which contains or has been treated with a substance not present in any such foodstuff when it is in a normal, pure and sound condition;

Further to the above, the Regulations Governing the General Hygiene Requirements for Food Premises and the Transport of Food, R.918, state the following in this regard:

(4) A surface referred to in sub regulation (1) and a facility referred to in sub regulation (2) shall be –

(b) cleaned and washed, as and when necessary, during and/or immediately after the handling of food, so that contamination of the food that comes into contact with any such surface or facility is prevented, and any such surface or facility shall, before food comes into direct contact therewith, contain –

(ii) no remains of cleaning materials or disinfectants which may pollute the food.

**The mentioned Act does not require for any substances used on a food premises for cleaning purposes to be approved by this Department.**

*The above is an extract of comment of the act by Mr. A. Pretorius Director (Mr AWJ Pretorius pretoa@health.gov.za) is the chairperson of the Food Legislation Advisory Group (FLAG) and serves on several other committees that are relevant to the functions of the Directorate. Tel: +27 12 395 8799.*

**Available packaging:**

- 5 and 25 litre container(s)

**Recommended dilution directions for concentrate:**

- BIO-TORQ Biofilm Remover can be diluted for various applications.
- For intense deep cleaning purposes, it is recommended to dilute up to 1:30 (i.e.1 part BIO-TORQ Biofilm Remover added to 30 parts water) making a suitable deep cleaning foaming product to be applied with foaming trigger spray attachment.
- The mixing solution is a guideline and is dependent on the required application and your evaluation of dirt to be cleaned
- Allow 5 – 10 minutes' activation time
- Your standard disinfection/sterilization regime is to be followed once the surfaces have been cleaned

**PRODUCT CHARACTERISTICS**

**• Enzyme Type :**

- 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 & 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.

- **Salmonella:** Not detected

- **pH:** 7.0 – 8.5

- **Appearance:** Clear liquid

- **Fragrance:** No fragrance added

- **Stability:** Two years at 2°- 35° C

**Storage and handling:**

- Always store in a cool dry place
- Avoid eye and skin contact
- Wash hands thoroughly with warm, soapy water after handling

Toxicity testing conducted by outside laboratory revealed no acute oral toxicity, no acute dermal toxicity, and no acute inhalation toxicity at maximum dose.

**BIO-TORQ Biofilm Remover**, means Green Technology This unique formulation meets the criteria for a cleaner, greener, smarter programme for green technology. The BIO-TORQ Biofilm Remover designation is used for formulations that utilize biodegradable surfactants at a neutral pH, contains no phosphates, no solvents, and low concentrations of volatile organic compounds (VOC), therefore, it is safe for the user and the environment.

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