

# Technical Bulletin

# Oxy Plus Sanitiser

## Powdered Bleach with Multi Enzymes Plus Antibacterial Action

### Product Description:

OXY PLUS is a free flowing, white crystalline powder, with multi-enzyme system, used for bleaching and stain removal in laundries and kitchens, by releasing oxygen when mixed with water. It also has a proven biocidal active ingredient (White prills of TAED – Bleach activator) in the formulation against three strains of bacteria to give 99.99% reduction on fabric and ware-washing surfaces. Biocidal efficacy is important for the:

- Prevention of odours arising from fabric.
- Reduction of bacterially induced fabric damage.
- Inhibition of washing machine corrosion.
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### Application:

#### LAUNDRY:

OXY PLUS releases oxygen when mixed with water. This allows for safety on all fabrics and wash fast colours. The multi-enzyme system helps with the removal of blood, fat, food and grass stains. The activator allows the fabric to be oxygen bleached at lower temperatures over a shorter time with biocidal activity.

#### WAREWASHING:

OXY PLUS may be used as a soak for removing tannin stains from melamine, crockery and teapots. The enzymes aids in crockery care. The pH is lower than chlorine systems which means there is a reduced dishware corrosion and less handling hazards. At recommended dosage rates the reduction in the number of colony forming units per mL at levels greater than 99.999%.

#### WAREWASHING:

OXY PLUS gives the best results by adding 14 grams of product to 10 litres of wash water, at a temperature of at least 35oC. For optimum performance, the temperature of the water should be greater than 50° for enzyme activity and effective kill of 3 strains of bacteria (See Table 1).

LAUNDRY: OXY PLUS gives best results by adding 30 grams of product to 10 litres of hot water, to obtain a minimum of 240 ppm of active oxygen and 120ppm of biocidal activator\* even at lower temperatures at a contact time of 7 minutes to achieve a 99.99%. (See Table 1)

SOAK WASHING: OXY PLUS gives best results by adding 22 grams per 10 litres for removing of difficult stains. For optimum performance of the multi-enzymes, the temperature of the water should be between 50 -60oC. Allow to soak for one hour.

The biocidal activity of OXY PLUS (TAED) activated formulations against the following three strains of bacteria was investigated:

Eschericia coli (E.coli). This is a potential pathogen found in the human gut. Its presence is an indicator of faecal contamination and is associated with some types of food poisoning. It is a common test organism in many standards.

Streptococcus faecalis (Strep.faecalis). This bacteria is also a potential pathogen and indicator of faecal contamination.

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Staphylococcus aureus (Straph. aureus). This is a skin pathogen and causes infections of cuts and wounds.

The efficacy of the OXY PLUS (TAED activated formulation) can be seen more clearly if we examine the percentage reduction in bacteria obtained. What is required by many standards throughout the world is a 99.99% reduction (equivalent to a log reduction of 4 or more). Anything less than this can still leave many thousands of bacteria remaining after the wash and is unsatisfactory for biocidal purposes. (See Table 1.). The procedures followed to determine the biocidal efficacy follow British Standard 6471:1984.

TABLE 1

FORMULATION	PERCENTAGE REDUCTION IN BACTERIA		
	E. coli	Straph. Aureus	Strep. Faecalis
WATER ONLY	99.98 (Log <sub>3</sub> )	99.78	99.68
OXY SOAK	>99.99 (Log <sub>4</sub> )*	99.99	99.94
PERCARBONATE 8% TAED 2.5 %		99.99	99.88
OXY PLUS (TAED 4%)		>99.99 (Log <sub>4</sub> )	>99.99

#### DUE TO MECHANICAL LOSS PHOSPHATE STATEMENT – NP

The compliance criteria for a Phosphate detergent according to ACSMA is 'NP' – contains no phosphorus if the level of phosphorus measured is <= 0.5% in usage.

#### Food Safety Statement:

With regard to the use of this product as a cleaner and / or sanitiser that may have incidental contact with food:

- 1) The raw materials / ingredients of this product are permitted as 'processing aids' as listed under clause 12 of the Food Standard Code 1.3.3 (Food Standards Australia New Zealand FSANZ) or Are Generally Regarded As Safe (GRAS) according to the US Food and Drug Administration (FDA) or are recognised in the US Code of Federal Regulations (CFR) Title 21 part 178 as indirect food additives.

When used in accordance with the directions described in this product technical bulletin, this product complies with these recognised food safety parameters.

**SHELF LIFE:** As a quality assured manufacturer, Castle Chemicals has a stringent Quality assurance programme. As part of this regime, the label on this product shows a batch number and date of manufacture. This product has a shelf life of 12 months from the label printed date of manufacture. This information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Castle Chemicals assumes no responsibility for personal injury or property damage to vendees, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of material.

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