

Technical Bulletin

Chloraby

Detergent Bactericide

Product Description:

A broad spectrum chlorine-releasing detergent bactericide, providing heavy duty detergency characteristics and simultaneous anti-microbial activity against a wide range of gram-negative and gram positive bacteria and yeasts in cold, tepid or hot water at recommended use dilutions. The available chlorine level is 3% in the concentrate form.

Routine use of CHLORABY is indicated where the desire is to render all inanimate surfaces for which the product is recommended physically clean and free from most common bacterial organisms.

CHLORINE - is available as a compressed gas in liquid form, as calcium hypochlorite containing 65% available chlorine, and as sodium hypochlorite in numerous commercial preparations for bleaching and disinfecting. Recently, organic compounds providing available chlorine have been developed.

The antibacterial activity of hypochlorite solutions is seriously depreciated by organic contamination, temperature, exposure to light, age and alkalinity. It is a well known fact that increasing the alkalinity of solutions having available chlorine derived from a hypochlorite decreases the bacterial property. Work by Johns (1934) showed the germicidal potency of hypochlorite is dependant on both:

- (a) the consideration of available chlorine and
- (b) the pH of the solutions or
- (c) upon the amount of hypochlorous acids formed, which of course is actually dependent upon both (a) and (b) factors.

But the influence of the pH, particularly in dilute solutions, is even greater than the percentage of available chlorine. This effect is not nearly so evident where chlorine is donated by organic sources.

In so far as organic contamination may be present, it must be considered that hypochlorites are quickly and seriously de-activated in the presence of organic matter, living tissues, organic matter and alkaline pH greatly reduce activity. Once again, the degree of depreciation is far less when chlorine is donated by organic sources.

Thus, it is evident that, although chlorine is a widely recognised and respected bactericide, the manner in which it is made available at the point of biological activity is of the utmost importance in chemical disinfection applications. Furthermore, unless the available chlorine is provided in a vehicle possessing significant detergent properties the antibacterial principle is unlikely to be able to penetrate organic and inorganic soil exposing the protoplasm of the bacterial cell to direct contact and thus destruction. These considerations indicate CHLORABY as the product choice where the desire is to utilise chlorine as the antibacterial agent.

Technical Bulletin

Application:

Mix 30 grams of CHLORABY to every 5 litres of warm water. Delivers 180 ppm of available chlorine. Apply this solution to the surface you require to be cleaned and sanitised.

In order to obtain bacteriologically clean surfaces, an antibacterial agent must exhibit quick, effective wetting and soil penetration characteristics.

CHLORABY is formulated with a synergistic complex of 8 chemical components each one of which has been selected, tested and proven to perform a specific task and carefully balanced to potentiate the detergency and antibacterial characteristics.

The principle of synergism can be described as the harmonious action of 2 or more substances that together produce an effect which neither could produce alone, and which is greater than the additive effect of to substances. In other words, a synergistic effect is said to obtain when the result is greater than the total sum of the parts.

The CHLORABY formulation is a complex of compatible detergent types providing an unusual surfactant system which exhibits superior wetting, penetration and chemical degradation of common particulate soils, proteinaceous soils, oils, greases, juices and exudates.

Rapidly soluble, CHLORABY thoroughly wets the surface to be cleaned and disinfected, lowers the surface and interfacial tension, peptises (breaks large soil particles into small), detaches, emulsifies (unites oils and greases with the detergent system), disperses, and sequesters (holds soil in suspension preventing redeposition of the cleaned surface).

So thoroughly does CHLORABY remove soils and, by virtue of its inbuilt chelating agents, rinse them freely from surfaces, that subsequent rinsing with fresh water is unnecessary and may be eliminated.

The CHLORABY formulation is buffered, that is to say, it maintains its pH throughout the working life of the solution, this enabling the preparation to go on cleaning long after ordinary detergents are exhausted.

However, CHLORABY will not have an adverse effect on the skin or users who have no more than normal sensitivity to heavy duty detergents.

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
- 2) 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.

AQIS APPROVED UNDER CATEGORY 7 FOR USE AS A SANITISER / DETERGENT.

White, dustless, free flowing powder of uniform particle size producing a clear solution when diluted. Mildly chlorinated, non-residual.

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.

Page 2 of 2