PROXEL™ CMC-E Preservative, an aqueous solution of 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT), and 2-Methyl-4-isothiazolin-3-one (MIT), is an antibacterial and antifungal preservative for aqueous industrial compositions such as adhesives, tackifiers, dispersed pigments, sealants, mastics, caulks, paints, coatings and other building materials. This product is also used in metalworking fluids, metal cleaning fluids, hydraulic fluids, industrial process water, pesticides for non-food applications, including: fungicides, herbicides, insecticides, repellents, and bio-pesticides.

PROXEL™ CMC-E Preservative is an in-container preservative for the control of bacteria and fungi in industrial and household consumer products including all-purpose liquid cleaners, polishers and anti-tarnish products, air fresheners and carpet shampoos, prespotters, liquid dishwashing detergents, automotive appearance products such as cleaners, waxes and polishes, liquid laundry products, and package utility products such as pre-moistened sponges and mops.

PROXEL™ CMC-E Preservative is registered with the Environmental Protection Agency and has been granted EPA registration No. 6836-259.

Summary

PROXEL™ CMC-E Preservative exhibits:

a. Effective control of a wide range of bacterial and fungal organisms at economic concentrations
b. Rapid reduction of microbial populations
c. Ease of use due to its liquid form

Properties of Proxel™ CMC-E Preservative

<table>
<thead>
<tr>
<th>Composition</th>
<th>A 1.5% total active aqueous solution of 5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT), and 2-Methyl-4-isothiazolin-3-one (MIT). Contains magnesium salts and copper salts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear, pale green</td>
</tr>
<tr>
<td>pH (25°C)</td>
<td>2.0-4.0</td>
</tr>
<tr>
<td>Density (25°C)</td>
<td>1.02 g/cm³</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>100°C</td>
</tr>
<tr>
<td>Storage Stability</td>
<td>Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Protect from freezing. If frozen allow and stir well.</td>
</tr>
<tr>
<td>Compatibility</td>
<td>Avoid strong oxidizing and reducing agents, strong alkalis.</td>
</tr>
</tbody>
</table>

General

Many aqueous industrial compositions can support the growth of a wide range of bacteria and fungi. These organisms can chemically destroy the components of these formulations and render them unusable. High water content formulations are especially prone to microbial contamination and can be difficult to recover if they become contaminated. PROXEL™ CMC-E Preservative is effective against both bacterial and fungal organisms and it will prevent growth even at high concentrations of these organisms. PROXEL™ CMC-E Preservative is particularly effective in preserving a wide range of industrial aqueous based products from bacterial and fungal spoilage.
FDA Clearances

PROXEL™ CMC-E Preservative complies with the following United States Food and Drug Administration (FDA) clearances.*

*Comments noted below each listing

21 CFR 175.105 Food packaging adhesives

For use only as an antimicrobial agent in polymer latex emulsions

21 CFR 175.300 Resinous and Polymeric Coatings

For use only as an antimicrobial agent in emulsion based silicon coatings at a level not to exceed 50 mg active ingredient/Kg in the coating formulation.

21 CFR 175.320 Resinous and Polymeric Coatings for Polyolefin films

For use only as an antimicrobial agent in emulsion based silicon coatings at a level not to exceed 50 mg active ingredient/Kg in the coating formulation.

21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods

1. As an antimicrobial agent for finished coatings and for additives used in the manufacture of paper and paperboard including fillers, binders, pigment slurries, and sizing solutions not exceeding 25 ppm active ingredient in coating formulations and additives.

2. As an antimicrobial agent for polymer latex emulsions in paper coatings not exceeding 50 ppm active ingredient in the coating formulation.

21 CFR 176.180 Components of paper and paperboard in contact with dry foods

1. As an antimicrobial agent for finished coatings and for additives used in the manufacture of paper and paperboard including fillers, binders, pigment slurries, and sizing solutions not exceeding 25 ppm active ingredient in coating formulations and additives.

2. As an antimicrobial agent for polymer latex emulsions in paper coatings not exceeding 50 ppm active ingredient in the coating formulation.

Compatibility

Isothiazolinones are generally compatible with most components of industrial formulations. However, the presence of a few agents will cause degradation of the active ingredients (and therefore some care is necessary). Agents such as thiols, mercaptans, secondary amines, sulfides and other nucleophiles are to be avoided in formulations. Conditions of high heat for long periods of time (> 50°C) and pH above 9 will lead to loss of activity.
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