

C800

Penetrant, Dispersant, Barrier-Film Corrosion Inhibitor

APPLICATION

C800 is a unique non-ionic amide with dispersing, filming and foam control properties that make it useful in closed loops, cooling and boiler water systems as a penetrant, dispersant, and corrosion inhibitor.

Deposit control - C800 is an efficient penetrating and dispersing agent. Unlike most dispersing agents, C800 has the added benefit of controlling foam in many situations. The uniqueness of C800 comes from its combined hydrophobic/hydrophilic nature. C800 is especially effective in controlling deposits caused by organics such as paraffins, oils, pitch, and microorganisms. C800 softens and disperses most organic deposits that foul industrial water systems, including air washers. Because organics often act as adhesives for inorganic foulants, C800 is also useful as an adjunct to mineral scale control agents. The required concentration of C800 will vary according to the amount of deposit present. In some cases only 1 or 2 ppm residual in the recirculating water will be required, but in severe conditions, concentrations as high as 50 ppm may be needed.

Corrosion Control - The hydrophobic property of C800 attracts it to metal surfaces in cooling water systems where it forms an organic barrier to the corrosion process. The product is especially useful as a corrosion inhibitor in closed loop and cooling water systems fouled and contaminated with sulfate-reducing bacteria which are well known for their contribution to microbiologically induced corrosion. Neither anodic nor cathodic inhibitors are able to penetrate and uniformly passivate surfaces under these conditions. C800 penetrates and forms a protective film as it disperses the deposits. This dual action makes it the most effective corrosion inhibitor available for control of microbiologically induced corrosion. Removal of deposits eliminates the anaerobic sites necessary for the growth of *Desulfovibrio desulfuricans* and permits the formation of a protective film over the cleaned surfaces.

An initial dose of 50-300 ppm of C800 is recommended to form the protective film needed to provide control of microbiologically induced corrosion. The thicker the deposit, the higher the dosage of C800 required. The concentration should be maintained by continuous addition of C800 to the recirculating water.

Industrial Cleaning Compounds

C800 can perform the same functions described above over a shorter time at higher concentrations. These properties make the product a very useful component of industrial cleaning formulations. The dispersing properties of C800 also its use as a component of either alkaline or acidic cleaning solutions. Its nonionic, nonaqueous characteristics allow its use at any pH and in the presence of either anionic or cationic materials.

Alkaline Cleaning Compounds - C800 in alkaline cleaning solutions provides a faster and more complete removal of deposits. C800 facilitates the cleaning action, but systems cleaned with C800 solutions also tend to remain clean longer and thus require less frequent attention.

For alkaline cleaning compounds, C800 concentrations of 1% - 20%, based on the weight of dry solids (alkali builders, detergents, etc.), are recommended. The amount of C800 in the compound should be sufficient to provide a concentration of at least 0.1% of C800 when the compound is added to water to prepare the cleaning solution.

Acid Cleaning Compounds - The use of C800 in descaling agents and other acid-cleaning solutions improves the penetration of these solutions into the deposits, loosens deposits faster, and reduces the amount of acid attack on metals. One combination that has been used successfully is 1 part by volume of C800 to 10 parts of muriatic acid (35% HCl). This amount of C800 disperses readily in the strong acid, but without additional emulsifiers it slowly separates when agitation stops. However, if this mixture is added to an equal volume of water, a relatively stable emulsion is usually formed. With appropriate emulsifiers, other ratios of acid to C800 can be used to form stable products. Products can also be formulated containing other acid inhibitors, such as propargyl alcohol, to provide more complete inhibition of acid attack on metals.

Solvent-Type Cleaning Compounds - C800 is used with other organic solvents, wetting agents, and emulsifiers to prepare emulsifiable solvent-type cleaning compounds. Inclusion of C800 into this type of compound greatly increases the solubilizing and dispersing powers of the product.

C800 is soluble in most polar and nonpolar organic solvents and is compatible with many different types of emulsifiers. The amount of C800 required in these compounds depends on the requirements of the formulated product and varies from 5% to more than 50%.

PACKAGING & DELIVERY

C801 is available in 20 Liter pails, 205 Liter drums, totes and bulk. The product containers should be kept tightly closed. Protect from freezing.

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