VERSENE™ Chelating Agents

Personal Care Applications



Products

The Dow Chemical Company offers a range of crystalline and liquid VERSENE™ Chelating agents. The products most commonly used in personal care formulations are:

- **VERSENE NA2 Crystals:** High purity disodium EDTA for use at neutral pH
- **VERSENE 220 Crystals:** High purity tetrasodium EDTA for use at higher pH
- **VERSENE 100XL:** High purity tetrasodium EDTA in liquid form

Why Use VERSENE?

- **Antioxidant Protection:** VERSENE chelating agents control metal ions that catalyze oxidation, degradation and rancidity of emulsions. These reactions, if uncontrolled, lead to color changes and off-odors of fats and oils. Metal ions also attack important fragrance components, which are so valuable to the identity of a product.
- **Improved Antimicrobial Performance:** VERSENE Chelating Agents help protect product quality by acting as antimicrobial boosters. When used as part of a preservative package, EDTA works synergistically with antimicrobial additives by controlling the metal ions that contribute to microbial cell growth and viability. A chelant addition rate of 0.1-0.3% can significantly reduce microbial contamination, resulting in increased product shelf life.
- **Enhanced Ingredient Strength:** VERSENE Chelating Agents stabilize vitamins, essential oils and essential fatty acids, which can be compromised by the presence of metal ions. This results in products with higher potency and increased shelf life.

Guidelines for VERSENE Products

Typically, a dosage of approximately 0.1% VERSENE Chelating Agent (by weight) is used to control metal ions in personal care formulations including emulsified and multiphase systems. However, addition rates may vary depending on the nature and concentration of the problem metals, as well as the type of product in which the chelating agent is incorporated. When choosing a chelating agent, selection should be based on system pH, not the pH of the chelating agent. Chelating agents should be added early in the formulating process so product degradation can be prevented before it begins.

Interested in Learning More?

To learn more about VERSENE™ chelating agents and our supporting services, call us toll-free at +1 (800) 447-4369 or visit www.versene.com. We'll be happy to answer your questions, provide additional literature, and send samples of VERSENE™ products for your evaluation.

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