



**NEW FOR 2006**



Naturally Fortifying Enhancement Systems

## Enhansys™ C-135

### Naturally Fortifying Enhancement Systems for Personal Care Products

#### Overview

**Enhansys™** is a new line of tailored personal care ingredients that fortify your formulations naturally and at the same time help you to achieve a number of challenging formulation goals. These naturally-derived, Patent-Pending proprietary systems give you an alternative approach to protecting your formulations from manufacturing to the shelf, while at the same time enhancing formulation performance.

**Enhansys™** is a versatile and cost effective approach for fortifying and enhancing Personal Care product formulations. Use **Enhansys™** for the formulation performance functionalities of conditioning, moisturization, thickening, stabilizing and pH control, in place of traditional ingredients-*and find that traditional preservatives are not needed.*

**Enhansys™** fortified formulations are self-preserving systems that enable a high level of protection against in-package biodegradation resulting from manufacturing contamination, process water, raw materials and/or environment.

**Enhansys™** systems are clear liquids that function at low concentration and are fully compatible with nonionic, anionic, and cationic surfactants, emulsifiers and proteins, and are stable over wide pH and temperature ranges.

**Enhansys™** systems are based on INCI listed materials that are GRAS, naturally derived, and food industry ingredients that have been tested extensively to meet Personal Care regulatory standards.

Patent-Pending **Enhansys™ C-135** is a water based proprietary system of functional ingredients that bring a range of benefits to Personal Care formulations:

**Lactic acid** is an effective **Skin Conditioner** and useful in **pH Control**;

**C4-18 Perfluoroalkylethyl Thiohydroxypropyl-trimonium Chloride** (Masurf FQ20) is an ultra efficient **Stabilizer, Hair and Skin Conditioning Agent.**

#### Typical Properties

Physical form ..... Water White, Liquid  
 pH..... 3.0 – 5.0  
 Storage ..... Store between 0°C(32°F) and 32°C(90°F)

#### Typical Use Levels/pH

0.3% - 2.0%  
 Optimal formulation pH ≤ 7

#### Handling Information

Refer to the Material Safety Data Sheet (MSDS) available from Mason Chemical Company for information on the safe use, handling and disposal of this product.

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## Enhansys™ C-135

Features	Benefits
Naturally-Derived	Consumer Appeal, Safer Alternative, Improved Labeling
GRAS Ingredients	Consumer Appeal, Safer Alternative
Fortifying	Storage and Shelf-Life Stability, Inhibits Biodegradation
Fortifying	Self Preserving Formulations
Multifunctional Enhancements	Moisturizing, Hair & Skin Conditioning Agent,
Color Stable	Formulation Color Stabilizer
Temp. Stable	Formulation Stability
Water Soluble	Ease of use, Manufacturing Ease
No Odor	Excellent for Low or No odor formulations
No Animal Testing	No Special Labeling
No Conventional Preservatives	Easier to Navigate Global Regulations

### Color/Odor/Bio-Fouling Formulation Stability Testing

Formulations	Initial			1 Month @ 35°C			3 Months @ 35°C		
	Color Change	Odor Change	Bio-fouling	Color Change	Odor Change	Bio-fouling	Color Change	Odor Change	Bio-fouling
<b>Control Formulation/ No Enhansys</b>	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Control Formulation/ 1.0% <i>Enhansys C-135</i></b>	No	No	No	No	No	No	No	No	No

Note: Biodegradation/Bio-fouling/Spoilage of formulations can be caused from poor quality water, raw materials and/or environment.

### Self Preserving Properties of Different Personal Care Formulation

Formulations	Formulations Physical Stability @ RT			
	Initial	2 weeks on Shelf	1 Month on Shelf	3 Months on Shelf
<b>Cationic Conditioner/ No Preservative</b>	Stable	Unstable	Unstable	Unstable
<b>Cationic Conditioner/ 0.5% <i>Enhansys C-135</i></b>	Stable	Stable	Stable	Stable
<b>Nonionic Lotion/ No Preservative</b>	Stable	Unstable	Unstable	Unstable
<b>Nonionic Lotion/ 1.5% <i>Enhansys C-135</i></b>	Stable	Stable	Stable	Stable

Patent-Pending *Enhansys™ C-135* is a proprietary system of functional ingredients:

Lactic acid CAS# 50-21-5, EINECS# 200-018-0

C4-18 Perfluoroalkylethyl Thiohydroxypropyl-trimoniun Chloride CAS# 70983-60-7, EINECS# 275-091-5

Refer to Material Safety Data Sheet for Handling and Safety Information and Toxicology Summary.

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