

# Crothix™ Liquid

## High performance liquid thickener

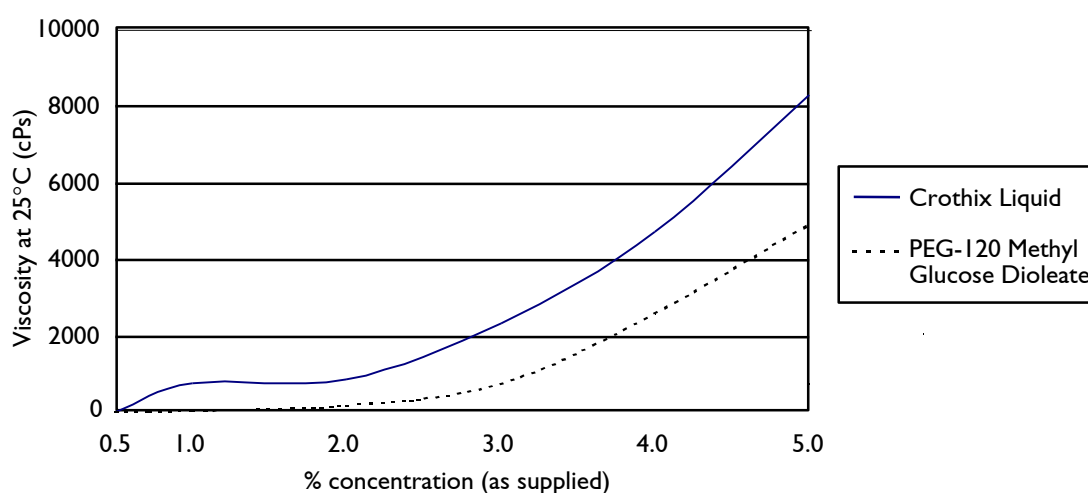
Crothix Liquid is a new nonionic liquid thickening agent designed for aqueous detergent systems. As an optimised blend of high molecular weight ester and modified vegetable triglycerides, Crothix Liquid not only thickens a wide range of surfactants but can also contribute to a conditioned after-feel in rinse-off products. In an easy-to-handle liquid form, Crothix Liquid can be used to thicken cold mix systems, thereby reducing energy requirements and manufacturing costs. Crothix Liquid offers superior thickening in a variety of personal care products, requires no neutralisation and forms no nitrosamine by-products.

### Benefits

- nonionic vegetable derived liquid thickener
- conditioned afterfeel on skin and hair
- recommended for cold mix systems
- useful for difficult to thicken systems
- lower energy input requirements
- suitable for clear systems
- requires no neutralisation
- low usage levels

### Effective thickening

Crothix Liquid can provide superior thickening performance to conventional liquid thickeners in surfactant systems. Figure 1 shows that Crothix Liquid produces higher viscosities from a shampoo base\* than PEG-120 Methyl Glucose Dioleate, even at low inclusion levels of 1-2%.



**Figure 1:** Comparative viscosity – Crothix Liquid vs PEG-120 Methyl Glucose Dioleate

* Base formulation:	% w/w
Ammonium lauryl sulphate	30.0
Crodateric CAS 50 (Cocamidopropyl hydroxysultaine)	7.0
Crovol M70 (PEG-60 corn glycerides)	2.0
Deionised water	to 100
Viscosity modifier	0.5-5.0

\*Base (control) viscosity = 50 cPs (spindle #3, 25°C)

### Conditioned afterfeel

In addition to being an effective thickening agent, Crothix Liquid contains PEG-6 caprylic/capric glycerides, a modified vegetable oil with well-known emollient, superfatting and counter-irritant properties. It is frequently included in aqueous detergent systems to counter the harsh drying effects of some surfactants and enhance skin feel on wash-off.

### Applications

Crothix Liquid's powerful thickening properties and versatility allow it to be formulated into a wide range of clear, opaque or pearlescent products:

- all shampoo types
- shower gels
- bath foams
- facial washes
- liquid soaps
- clear detergent gels

Crothix Liquid is recommended as a thickening agent in all detergent cleansing products, and is particularly useful for thickening cold mix formulations. It has been found to work successfully as a thickening agent in hard to thicken systems, as well as a number of DEA-free surfactant blends using Crodasinic LS30 (sodium lauroyl sarcosinate) with either SLES, SLS, ALES or ALS as the primary surfactant.

### Formulating

Crothix Liquid is freely soluble in anionic, nonionic and amphoteric detergent systems, and shows good compatibility with cationic salts. It is tolerant to electrolytes and performs best over a pH range of 5-9. Crothix Liquid should be preheated to 55-60°C and then added to the cold surfactant base with mixing. To produce clear products the system should be adjusted to pH 5 or higher.

Typical inclusion levels are 0.5-5.0% depending on the surfactant system.

**INCI name**

PEG-150 Pentaerythrityl Tetrastearate and Aqua and PEG-6 Caprylic/Capric Glycerides.

**Health and safety**

The components of Crothix Liquid are non-toxic on ingestion, essentially non-irritating to skin and eyes and non-sensitising.

**Non-warranty**

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