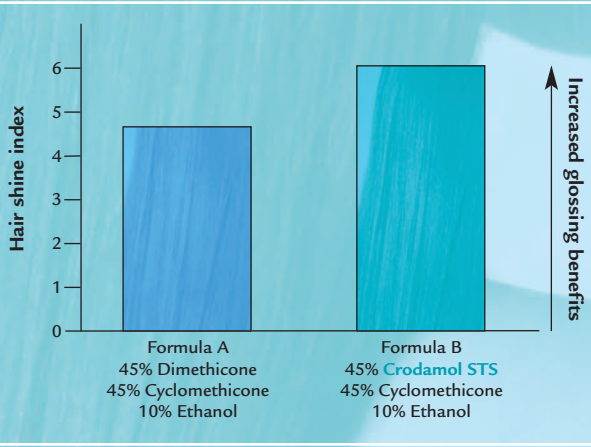
Superior to silicone...

Crodamol STS

Crodamol STS is an innovative new ester offering major formulating and functional benefits to personal care systems. **Crodamol STS** possesses a silicone-like feel and imparts exceptional hair glossing properties. Combined with its ease of emulsification and wider formulation compatibility, **Crodamol STS** represents a superior alternative to standard silicones.

- Silicone-like skin feel and performance
- Excellent emulsion stability and aesthetics
- Mild emulsions due to low emulsifier requirements



Extensive studies demonstrate the excellent glossing benefits of **Crodamol STS**

- Enhances wash-off resistance of creams and lotions
- Highly effective hair glossing agent
- Broad ingredient compatibility
- Forms cohesive films
- Excellent wax solvency and pigment wetting
- Reduces whitening effect of fatty alcohols and APDs

For a viable alternative to standard silicones choose **Crodamol STS**. Contact your nearest Croda division and ask for information and samples today.

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CRODA

Crodamol STS – The ester that's 'Superior to Silicone'

Function	Crodamol STS is an innovative new ester offering major formulating and functional benefits to personal care systems. Its unique structure provides many of the excellent sensory and functional properties of marketed silicones, whilst having superior attributes in terms of emulsion formulation and stability.
Composition	Propoxylated derivative of myristic acid and benzyl alcohol.
Physical form	Clear, pale yellow liquid
INCI name	PPG-3 Benzyl Ether Myristate
Applications	Make-up, sunscreens, APDs, lip care, creams and lotions, hair conditioners and shampoos, shine products, styling aids, gels.
Formulation	Crodamol STS exhibits broad compatibility with other cosmetic ingredients. It is easily emulsified forming stable emulsions with excellent aesthetics.
Typical usage levels	0.5 – 4.0% as supplied

Claim substantiation – Enhancement of shine

Shiny, healthy-looking hair is an ongoing priority for today's consumer. The provision of gloss to hair is often delivered through the use of silicones (dimethicone/cyclomethicone etc.), in formulas such as conditioners and shine sprays, where their relatively high refractive index and surface coating characteristics lead to films that add lustre to the hair. With a refractive index that is higher than standard silicones (1.496) and excellent coating characteristics, Crodamol STS offers enhancement in delivered shine in comparison with standard silicone systems.

Ex vivo assessment by digital imaging techniques have proven this effect, and demonstrates that the addition of 2% Crodamol STS enhances the shine performance of standard silicone containing systems such as shine sprays (figure 1). Total replacement of 45% DC200 dimethicone with 45% Crodamol STS within a dimethicone/cyclomethicone/ethanol shine spray provided a 33% increase in the shine index observed from the hair fibres (see graph overleaf).

Fig.1 Crodamol STS enhances hair shine

Formulating advantages

Crodamol STS offers a host of formulation advantages in personal care systems. With a relatively low skin spreading factor Crodamol STS forms particularly stationary, cohesive films thus making the product ideal for systems such as sunscreens and colour cosmetics where it can help to prevent creeping and migration of actives.

Although the skin spreading factor is quite low Crodamol STS has a relatively light touch and exhibits good rub-in characteristics. In fact it is known that Crodamol STS reduces the drag and heavy feel of high SPF sunscreen systems. The excellent wax solvency, binding properties and wetting characteristics ensure that Crodamol STS is an ideal ester for applications in colour cosmetics.

Crodamol STS can be easily emulsified and forms stable, aesthetically pleasing creams and lotions with relatively low emulsifier requirements. Compared with non-polar oils, polar lipophiles such as Crodamol STS produce lower interfacial tension in combination with water facilitating stable emulsion formation. The phase separation time (PST) of emollients in aqueous systems is a good indicator of the ease with which lipophilic material can be emulsified. The results of a simple PST experiment are illustrated in figure 2 and show the comparative stability of dispersions of Crodamol STS, C12–15 alkyl benzoate and dimethicone in water. Crodamol STS shows the least phase separation and provides a better dispersion appearance 10 minutes after agitation of the test system.

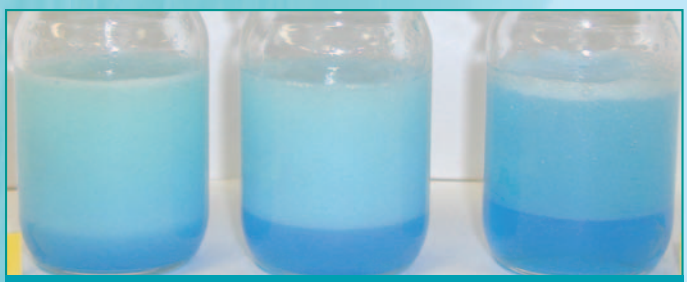

Fig. 2 The phase separation of Crodamol STS is less, indicating the potential for creating stable emulsions with greater ease.

Summary

Crodamol STS offers superb formulation and functional benefits in a wide array of cosmetic applications. The performance attributes and enhanced emulsion formation and stability allows Crodamol STS to be truly described as "Superior to Silicone".