Sodium Lauroyl Lactylate (SLL)

An extremely mild emulsifier derived from Lactic Acid. SLL imparts a wonderful skin feel due to its inherent moisturizing properties.

INCI Name: Sodium Lauroyl Lactylate
Usage Rate: 3-5%

Definition

SLL is the sodium salt of the lauric acid ester of lactyl lactate.

Description

When it comes to emulsifiers, SLL is in a family all its own: The Lactylates. Used for many years in the food industry, as dough conditioners in fact, the Lactylates offer unprecedented skin feel and moisturization in your formulas.

The natural and edible Lactylates are new to personal care, but are already being widely utilized because of their fabulous properties and gentle nature. SLL is extremely mild to skin and eyes, and can easily be formulated into creams, lotions, soaps, shampoos, liquid soaps, and more.

General Data

Shelf Life: 18 months when properly stored.
Storage: Store under cool, dry conditions. The container should be kept tightly sealed. Avoid exposure to direct sunlight for prolonged periods.

Specifications

Appearance: Waxy Solid  Saponification: 175-210
Flow Point: 55-59C  Color (Gardner): 7Max
HLB: 14.4  %Sodium: 6.0-8.0
Acid Value: 50-70
A beautiful emulsion can be made by using equal parts SLL and SSL (Sodium Stearoyl Lactylate). The Lactylates are so mild and moisturizing, the incorporation of additives beyond water and preservative is almost unnecessary.

To fully discover the power of the Lactylates, we recommend starting with a very simple formula.

I recommend starting at 3% of each in the formula, and increase incrementally to 5% each if the first batch does not offer stability.

When using the Lactylates, try to keep your process temperature at or below 170F, as temperatures exceeding this can cause caramelization or darkening of the Lactylates.

Incorporate the SLL into the water phase.
Incorporate the SSL into the oil phase.
Heat both phases to 160F and mix well.