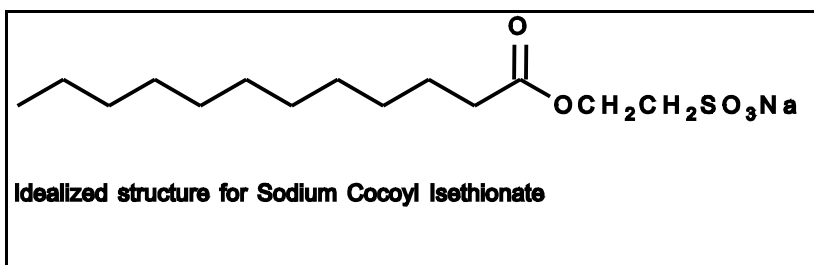


Technical Data Sheet

Sodium Cocoyl Isethionate



Sodium cocoyl isethionates (SCI) are mild, high-foaming, anionic surfactants. SCI products are highly suited for use in syndet bars, combo bars, liquid soaps and a variety of other personal care products. SCI produces a creamy and abundant lather that cleanses gently and leaves the skin with a luxurious, silky feel. It is also hard water tolerant and will not leave a soap film or residue like ordinary soaps.

All SCI grades are based on purified coconut oil, a natural and renewable resource.

Features

- Very low irritation
- Excellent foamer
- Lubricity
- Hard water tolerant
- Limited water solubility
- Various physical forms and packaging options

Benefits

- Mild to skin and eyes
- Rich and abundant lather
- Imparts silky skin after-feel
- Leaves no soap scum
- Rinses free from skin
- Easy to handle and use in all types of manufacturing processes

Typical Properties:

Physical Form	Granule	Powder
Particle size		
% Active	87	87
% Stearic Acid	-	-
% Total Fatty Acid	7	7
Color (APHA 5%soln)	10	10
% Moisture	<0.3	<0.3

Typical Ester C-Chain distribution of SCI (%)

C-Chain	%
C8	5.0
C10	6.0
C12	50.0
C14	19.0
C16	10.0
C18	10.0
C18:1	<0.1

SUITABLE FOR A VARIETY OF FOAMING PRODUCTS

The following are examples of the many personal care products that can benefit from the mild cleansing properties of SCI:

Syndet Bars

With its excellent lathering characteristics, mildness, and skin feel effects, SCI is the detergent of choice for syndet bars, in which no conventional soap is used.

Combo Bars

In combo bars, or combars, in which soap and detergent products are formulated together, SCI enhances the lathering properties of the bar in hard water. Use of sodium cocoyl isethionate in combo bars also improves their lime soap dispersion properties, thus producing a rich lather that rinses away readily and leaves little soap residue.

Liquid Cleansers

SCI contributes its excellent lathering, mildness and soft skin afterfeel to a variety of liquid personal care products, such as liquid soaps, shampoos, facial cleansers, and shower gels. Products can be formulated to achieve either a clear or a pearlescent appearance.

Others

SCI can also be used in a wide variety of other personal care products, such as hair mousse, shaving foams...anywhere that mildness and rich dense foam are desired.

SCI PERFORMANCE DATA

In addition to its characteristic mildness, SCI exhibits excellent performance in areas such as foam density, foam stability, lime soap dispersion and surface activity.

Foam Height

As shown in the table below, SCI gives abundant and stable foam even in hard water conditions, and performs well compared to other commonly used anionics.

Ross Miles Foam Height* (mm)

Surfactant (0.2% active)	At 0 ppm	At 150 ppm	At 300 ppm
	Water Hardness (Initial/Final)	Water Hardness (Initial/Final)	Water Hardness (Initial/Final)
SCI	180/180	225/225	220/220
Sodium Lauryl Sulfosuccinate	180/175	165/20	180/15
Sodium Laureth Sulfate	190/190	230/225	235/235
Sodium Lauryl Sulfate	210/175	215/200	230/210

*test run at 50°C for 5 minutes

Lime Soap Dispersion

Sodium cocoyl isethionate is advantageous in that it is hard water stable is even effective at soap scum dispersion when formulated together with traditional soap. The Lime Soap Dispersion Index is the amount of surfactant needed to disperse 100 parts calcium oleate.

Lime Soap Dispersion Index	
Surfactant	g of Surfactant/100 parts Of Calcium Oleate
SCI	22.8
Disodium Lauryl Sulfosuccinate	100.0
Sodium Laureth Sulfate	2.8
Sodium Lauryl Sulfate	24.0

Surface Tension and Critical Micelle Concentration

The degree of lowering of the surface tension relates directly to the surfactant's wetting ability and degree of surface activity. As its low relative CMC indicates, SCI is effective at low use concentrations.

Surface Tension and CMC Values at 25°C		
Surfactant	Surface Tension	CMC Values (mg/l)
	Of 0.1% active solution (Dynes/cm)	
SCI	25.2	280
Disodium Lauryl Sulfosuccinate	31.3	560
Sodium Laureth Sulfate	33.4	110
Sodium Lauryl Sulfate	32.0	8.2

ENVIRONMENTALLY ACCEPTABLE

Sodium cocoyl isethionate has been shown to have very low toxicity and low irritancy properties

- Oral toxicity: LD50: >2,000 mg/kg
- Primary Dermal Irritation (10% solids): Non-irritant
- Primary Eye Irritation: Moderate irritant
- Oleochemical based
- Biodegradable