Technical Data Sheet
Sodium Laureth Sulfate (SLES)

DESCRIPTION:

Sodium Laureth Sulfate (SLES) is a modified fatty alcohol sulphate exhibiting low level of colour and odour. This liquid product was especially developed for shampoos, bubble baths and other foaming toiletries. The excellent viscosity building properties, mildness and high foaming characteristics of **Sodium Laureth Sulfate (SLES) make it** particularly valuable in formulating a variety of cosmetic and personal care products.

TYPICAL PROPERTIES:

Percent active ingredient	27.5 – 28.5
Percent Sodium Sulfate	0.4% Max
Unsulfated Matter	0.8% Max
Critical micelle conc. Wt%	0.15
pH, 10% solution	6 - 8

PHYSICAL PROPERTIES:

- Compatibility: Compatible with anionic, non-ionic and amphoteric surfactants. Due to its anionic nature, it is not compatible with cationic surfactants.

- Excellent foaming properties – **Sodium Laureth Sulfate (SLES)** is among the highest foaming surfactants commercially available. Comparisons with lauryl sulfate, using the Ross-Miles foam test are shown in the following table (TABLE I) for both deionized and hard water. The results illustrate that while the product exhibits excellent foaming, the best overall foaming is given by the sulfate.

- Solubility in water of any hardness, low temperatures, perfume oils
- Continuous stability with pH changes, as well as metal ions and oxidizing agents.
- Viscosity Response – The viscosity of this sulphated lauryl ethoxylate is strongly affected by the addition of electrolytes as well as by lauryl alcohol ethoxylates, amides and amphoterics. By using small amounts of these materials, a wide range of viscosity is possible.

TABLE I
ROSS-MILES FOAM HEIGHT (mm)

Product	D.I Water		300 PPM Water	
	Initial	5 min	Initial	5 min
SLS	195	162	180	152
SLES	200	170	205	180

- Wetting – **Sodium Laureth Sulfate (SLES)** is a good wetting. As in the foam test, the wetting properties are even improved in hard water. A 0.3% concentration of **Sodium Laureth Sulfate (SLES)** required 7.0 seconds for wetting cotton tapes in distilled water, versus 5.0 seconds in water of 300 PPM hardness. An equal concentration of sodium lauryl sulphate produced results of 17.7 and 25.5 seconds respectively.

- The concentration of **Sodium Laureth Sulfate (SLES)** required for 25 seconds sinking time is 0.06% compared to 0.10% for sodium lauryl sulphate.

APPLICATIONS

- Used in the preparation of shampoos, foam baths and liquid hand soaps.
- It gives excellent foam properties in formulations where abundant foam is necessary.

STORAGE

Sodium Laureth Sulfate (SLES) should be stored in sealed containers at room temperatures. Overheating and freezing should be avoided. If freezing occurs slowly apply heat with agitation to ensure product is homogeneous before use.