AkzoNobel
Surface Chemistry

ELFAN® AT 84 G

Sodium Cocoyl Isethionate

Specification

Appearance Light yellowish granular

Parameter	Limits	Method
% Water	2 maximum	
Acid Value (mg KOH/g)	20 – 33	
Activity (meq/g)	2.31 – 2.46	
Klett Color	35 maximum	
Gardner Color	5 maximum	
pH	4.5 – 6.0	
Saponification Value (mg KOH/g)	160 minimum	

Measurements

Klett Color is measured as 5% in 30/70 IPA/water.

The pH is measured as 10% in water.

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Elfan® AT 84 / Elfan® AT 84 G

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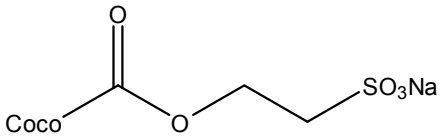
Elfan® AT 84 / Elfan® AT 84 G
INCI: Sodium Cocoyl Isethionate

Mild Anionic Surfactant for Cleansing Systems

INTRODUCTION

Elfan® AT 84/Elfan AT 84 G is an easy to use non-ethoxylated sulfate-free anionic surfactant. It provides good cleansing and is extremely gentle on skin with an excellent dermatological profile. Elfan AT 84/Elfan AT 84 G provides rich, creamy foam for superior cleansing - even in hard water. Skin and scalp maintain a very healthy and conditioned look, with minimal impact on the skin barrier. Elfan AT 84/Elfan AT 84 G is based on a vegetable fatty acid and is readily biodegradable. Its chemical structure is as follows:



Chemical Structure of Elfan AT 84/Elfan AT 84 G

APPLICATION AREAS

Due to the extreme mildness and high foaming performance of Elfan AT 84/Elfan AT 84G it is suitable for the following applications:

Shampoo, 2-in-1 Shampoo/Conditioner, Mousse, Bath and Shower Gel, 2-in-1 Shower Gel/Body Lotion, Body Wash, Facial Wash, Liquid Hand Soap, Syndet and Combi Soap Bar, Baby Cleanser, Shaving Cream, and Toothpaste.

FEATURES / BENEFITS

Excellent dermatological profile	Extra mild, ideal for baby products and sensitive skin
Dense creamy lather	Formulations with excellent creamy and stable foam
Superior skin cleansing	Suitable for facial cleansers
Low impact on skin barrier	Skin conditioning
Lime soap dispersancy	No soapy residue
Non-dusty granules for easy handling (G version)	Advantages in manufacturing process
Extreme smoothness without grittiness for micronized quality	Sensory enhancement in bar soaps
Elegant after-feel	Luxurious bath and shower experience
Readily biodegradable	Environmentally friendly

SUGGESTED USE LEVELS, AS SUPPLIED

3 to 20%, dependent on product application

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Elfan® AT 84 / Elfan® AT 84 G

FORMULATION GUIDELINES

Elfan AT 84/Elfan AT 84 G should be added with mixing to the water phase at 35 to 45°C. The maximum heating temperature for Elfan AT 84/Elfan AT 84 G is 60°C. The ideal pH range to formulate with Elfan AT 84/Elfan AT 84 G is typically from 5.5 to 7.5.

PERFORMANCE PROPERTIES

Foam Performance

Elfan AT 84/Elfan AT 84 G exhibit great foam performance regarding foam height and foam stability in both soft and hard water, as displayed in Figure 1.

Figure 1: Foam Height of Elfan AT 84 G

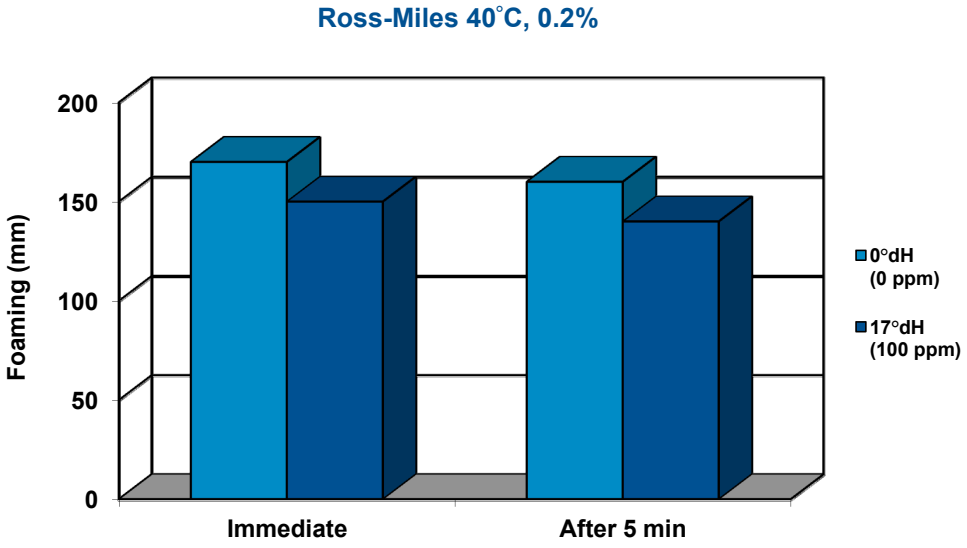

Figure 1: Foaming performance is measured by foam height of a 0.2 % solution of Elfan AT 84 G using Ross-Miles at 40 °C and water hardness of 0 °dH and 17 °dH (Grad deutsche Härte, German degree). Good foam quality is maintained, even after 5 minutes.

Transepidermal Waterloss (TEWL) and Skin Humidity

The TEWL study was performed using the Flex Wash Method, where a test panel consisting of 20 healthy males and females wash their forearms with a 5% active surfactant solution twice a day for 5 days. The surfactants evaluated were Elfan AT 84 G, Sodium Lauryl Sulfate and Magnesium Laureth Sulfate. The TEWL measurements were taken before and after washing using the Evaporimeter EP1. Relative TEWL % is shown in Figure 2.

Skin humidity measurements with the Corneometer were made in the same manner and parallel to the TEWL measurement. Relative dry out % is shown in Figure 3.

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Figure 2: Transepidermal Waterloss Comparisons

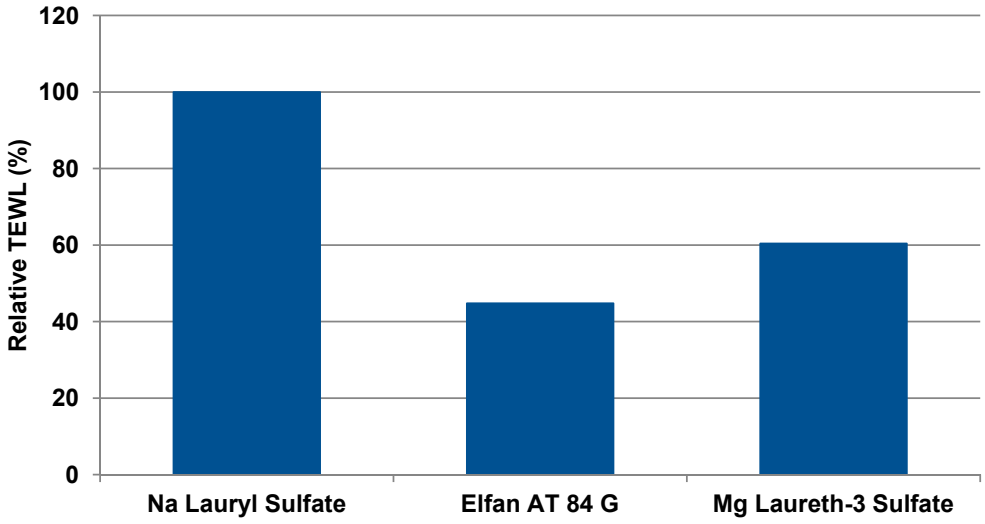

Figure 2: Elfan AT 84 G exhibits less TEWL compared to both Magnesium Laureth Sulfate and Sodium Lauryl Sulfate.

Figure 3: Skin Humidity Comparisons

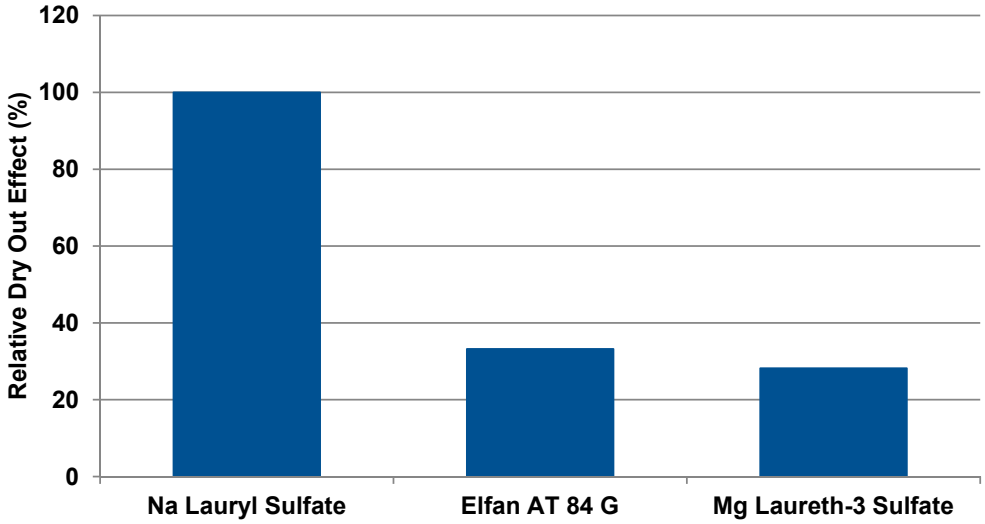

Figure 3: Elfan AT 84 G and Magnesium Laureth Sulfate showed significantly less drying than Sodium Lauryl Sulfate, which would equate to an improved skin barrier and less damage to the skin cells.

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Elfan® AT 84 / Elfan® AT 84 G

Skin Cleansing

The skin cleansing performance was evaluated using the Forearm Skin Wash Test. A test panel consisting of 20 healthy females had their forearms washed with the Forearm washing machine using a 5% active surfactant solution. The surfactants tested were Elfan AT 84 G, Sodium Lauryl Sulfate, and Magnesium Laureth Sulfate, with pure water used as reference. The skin color was measured with a Minolta Chromameter before and after test soil treatment and then after washing.

Elfan AT 84 G outperformed the cleansing performance of Magnesium Laureth-3 Sulfate and showed a similar performance to the very efficient Sodium Lauryl Sulfate as shown in Figure 4.

Figure 4: Cleansing Improvement %

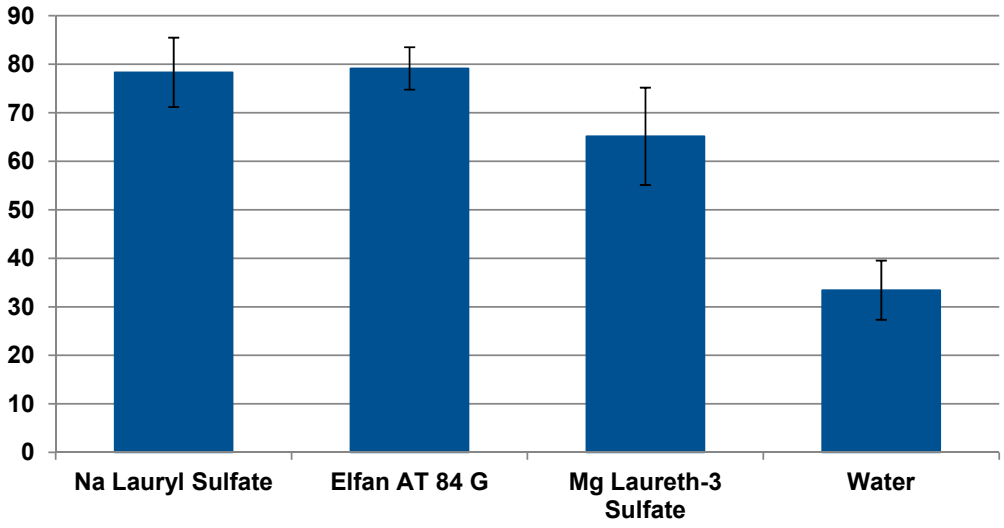

Figure 4: Cleansing improvement by usage of 5% active matter surfactant solution. Elfan AT 84 G provides similar cleansing improvement with better skin moisturization properties compared to sodium lauryl sulfate.

TYPICAL PROPERTIES

Property	Value
Activity, MW = 345	80 – 84%
Krafft point	30°C
CMC, 40°C	0.12 g/l
Surface tension (Du Nouy), 40°C, 0.1% a.m. DIN 53914	22.5 mN/m
Solubility	In water above Krafft point > 30°C
Dispersible	In water at 20°C

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Elfan® AT 84 / Elfan® AT 84 G

STORAGE AND HANDLING

Keep container tightly closed and store in a cool, well-ventilated area.

HEALTH AND SAFETY

Information on Elfan AT 84/Elfan AT 84 G relating to the EU Cosmetics Directive 76/768/EEC is available on request.

* REMARK

Elfan® AT 84 represents the product supplied in powder form whereas **Elfan® AT 84 G** represents the product supplied in granular form.

Elfan AT 84/Elfan AT 84 G stands for both versions of this product - the powder and the granular form.

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ELFAN AT 84 G Mild, Anionic Surfactant

Regulatory Information

Parameter	
CAS Number	61789-32-0
Australia	Yes
Canada	DSL
China	Yes
Europe	EINECS listed monomers and substances, EINECS,2630525
Japan	Yes
Korea	Yes, ECL Number: 14683
New Zealand	Yes
USA (TSCA)	Yes

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Sunday, 21 August 2011

RE: ELFAN® AT 84 G Material Origin BSE

To: Whom it may concern,

AkzoNobel Surface Chemistry Personal Care has completed a review of the ingredients used in the manufacture of our personal care products. As a result of this exercise, we are able to certify that the product below is free of any animal derived ingredients.

ELFAN AT 84 G Mild, Anionic Surfactant

Specifically, this product is derived from plant sources.

Sincerely,

Damani Parran
Regulatory, US
908 707-3756