Nouryon

Elfacos® GT 282S

A specialty rheology modifier for crystal clear thickening performance

INCI: Ceteareth-60 Myristyl Glycol

Elfacos GT 282S nonionic copolymer is a unique rheology modifier (polyalkylene glycol derivative) that enables crystal clear cleansing systems.

As a unique Newtonian associative thickener, it exhibits excellent viscosity synergism with surfactants and works in a wide pH range (2-12) with no impact on foam properties.

Recommended applications

Shampoos, body washes and liquid soaps.

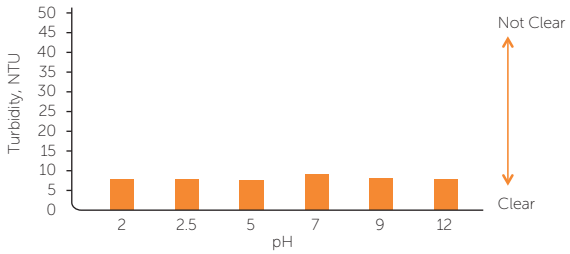
Features and benefits

- Thickens over wide pH range (2-12)
- Crystal clear formulations
- Synergistic thickening effect with most anionic and amphoteric surfactants
- Synergistic viscosity with salts)
- No impact on foaming
- Newtonian profile; easy to pour
- Excellent stability, even at high temperature
- Easy to use, 100% active pastille
- Typical usage 0.5% to 4.0%
- Available globally
- Approved in China

Clarity

Elfacos GT 282S nonionic copolymer exhibits exceptional clarity in aqueous systems.

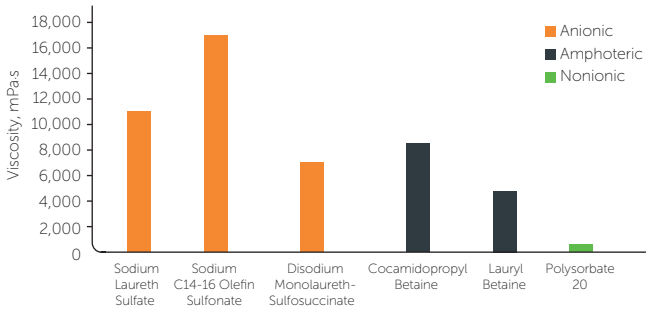
Figure 1: Clarity of Elfacos GT 282S 10% in water solution



Synergistic thickening

Efacos GT 282S nonionic copolymer exhibits excellent synergistic effect with most anionic and amphoteric surfactants.

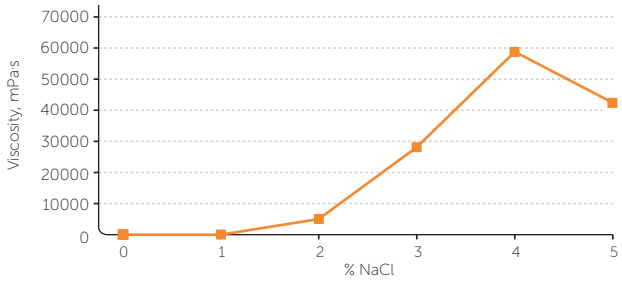
Figure 2: Thickening effect of 5% Elfacos GT 282S with 14% surfactant



Synergistic thickening with salt

Low levels of Elfacos GT 282S nonionic copolymer synergistically boost viscosity with salt.

Figure 3: Viscosity of SLES base with 0.5% Elfacos GT 282S and salt



Formulation used in the study: SLES Solution (pH 6.5)

INCI Name	wt/wt %
Water	40
Sodium Laureth Sulfate (20%)	40
Sodium Hydroxide (20%)	QS
Water	QS to 90%
Ceteareth-60 Myristyl Glycol, Elfacos GT 282S nonionic copolymer	0.5
Citric Acid (20%)	QS
Water	QS to 100%

Suggested use levels

Cleansing applications 0.5-3.0%

Formulation guidelines

Elfacos GT 282S is easily incorporated into surfactant and non-surfactant systems when working above the melting point (70-80°C). For ease of incorporation into cold process formulations, it is recommended to prepare a premix of 15% Elfacos GT 282S in water and subsequently add mix to the rest of the formulation.

The recommended procedure to prepare aqueous solutions of Elfacos GT 282S polyalkylene glycol derivative is:

- Heat water or the surfactant solution to about 70-80°C
- Add Elfacos GT 282S pellets while stirring rapidly
- Cool down with continued stirring
- During cooling, the mixture becomes clear at about 40°C (below cloud point on heating) and the viscosity increases.

Chemical and hydrolytic stability

The molecular structure of Elfacos GT 282S consists of three parts, where the central hydrophilic moiety is linked at both ends to lipophilic chains via hydrolytically stable ether bonds. This makes Elfacos GT 282S inherently resistant against hydrolysis, even at elevated temperatures and over a wide pH range.

Storage and handling

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

Health and safety

Information on Elfacos GT 282S polyalkylene glycol derivative relating to the EU Cosmetics Directive 76/768/EEC is available on request.

For more information and sample formulations contact us at PersonalCare.Marketing@nouryon.com.

USA and Canada
Chicago, USA
T +1 800 906 9977

South America
Itupeva, Brazil
T +55 11 4591 8938

Central America and Caribbean
Mexico City, Mexico
T +52 55 5261 7895

China
Shanghai, China
T +86 21 2220 5000

South East Asia
Singapore
T +65 6635 5183

India
Mumbai, India
T +91 22 6842 6700

Europe
Stenungsund, Sweden
T +46 303 850 00

Middle East
Dubai, United Arab Emirates
T +971 4247 1500

Russia
Moscow, Russia
T +7 495 766 1606

About Nouryon

We are a global specialty chemicals leader. Markets worldwide rely on our essential chemistry in the manufacture of everyday products such as paper, plastics, building materials, food, pharmaceuticals, and personal care items. Building on our nearly 400-year history, the dedication of our 10,000 employees, and our shared commitment to business growth, strong financial performance, safety, sustainability, and innovation, we have established a world-class business and built strong partnerships with our customers. We operate in over 80 countries around the world and our portfolio of industry-leading brands includes Eka, Dissolvine, Trigonox, and Berol.

For more information visit **nouryon.com**.

Nouryon