# technical data sheet

personal care specialties ashland.com

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**BULLETIN VC-1015** 

# natrosol<sup>™</sup> plus 330 CS/polysurf 67 CS cetyl hydroxyethylcellulose

efficient thickening with nature-derived hydrophobically modified cellulose

# formulator benefits

- nature-derived from cellulose, >54% natural origin 0 content according to ISO16128-2:2017
- vegan suitable 0
- delivers efficient thickening in a variety of product 0 formats
- improves emulsion stability, enabling finer oil-in-water 0 emulsions
- demonstrates synergy with common thickeners, 0 enabling more sustainable formulations through reduction in synthetic, primary rheology modifiers
- good surfactant and electrolyte compatibility 0
- effective over a wide pH range (3.5-11) 0
- surface treated for easy, lump-free processing  $\cap$

### formulation benefits

- enables formulations that deliver unique and playful textures, including;
  - non-tacky/ non-stringy feel
  - buttery textures with improved playtime
  - cushion and softness
  - reshapes to form smooth surface in jar, giving creams an unused appearance
- o thickens alkylpolyglucoside containing systems, such as sulfate-free shampoos
- reduces stringiness of surfactant-based systems 0
- enables low gel phase hair care emulsions with rich body that apply easily and don't weigh down hair

# applications

liquid soap and body washes, shampoos, conditioners, hair styling, AP/DEO, color cosmetics, sunscreens, face and body creams, hair masks, butters, face masks

#### product forms gels, liquids, emulsions

available formulations from Ashland conditioners, hair masks, shampoos, face and body creams, face masks, sunscreens

# chemistry



description: cetyl hydroxyethylcellulose preservative: non-preserved



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RESPONSIBLE CARE

typical properties	Natrosol Plus 330 CS	Polysurf 67 CS
Brookfield viscosity, 1% solution, cP	150-500	9,000-14,000
average molecular weight	350,000	550,000
moisture content, % maximum	5	5
ash content, % maximum, calculated as Na $_2$ SO $_4$	5	5

#### formulation guidelines

recommended use levels	0.10-1.0%
temperature/mixing conditions	<ul> <li>Add Natrosol<sup>™</sup> Plus 330/ Polysurf<sup>™</sup> 67 cetyl hydroxyethylcellulose to well agitated, room temperature water pH 7 or lower.</li> <li>Continue mixing until polymer is fully dissolved and a smooth solution texture is observed.</li> </ul>
when to add	Polymer is ideally added at the beginning of the formulation to ensure that the polymer is completely hydrated before adding additional ingredients.
tips from Ashland's solvers	<ul> <li>To decrease dissolution time: <ul> <li>Apply heat once polymer powder is well dispersed.</li> <li>Adjust pH to 8.5 or higher with NaOH, aminomethyl propanol (AMP) or triethanolamine (TEA)</li> </ul> </li> <li>Polymer can be pre-dispersed in an appropriate non-solvent, like glycol, prior to introduction to the water phase.</li> <li>In certain formulations, like butters, a drastic viscosity increase can be observed upon addition of Natrosol™ Plus 330/Polysurf™ 67 cetyl hydroxyethylcellulose. In these cases, a pre-solution of polymer can be made in a side vessel before addition to the main batch.</li> </ul>

#### safety, handling, and storage

It is recommended to use the product in rotation on a first-in first-out basis. The product should be stored under dry and clean conditions in its original packing and away from heat. The product is hygroscopic. The packaging is selected in a way to avoid ingress of moisture, but the water content of the packed product will/may increase if not stored properly.

Additional information concerning safety, handling and storage is supplied in the safety data sheet, which can be made available upon request. Such information includes:

- o classification and labelling per regulation for transport and for dangerous substances
- o protective measures for storage and handling

A toxicology summary can also be made available, on a confidential basis, by contacting your local Ashland representative.

#### regulatory

INCI: Cetyl Hydroxyethylcellulose CAS#: 80455-45-4 Component ingredients are listed in the China IECIC-2015 Other regulatory information is available on request.

