



SatiageI™VPC 512
texturizer

Personal care

Nature-derived hair styling and texturing agent

Today you can combine high performance and sustainability. Whilst synthetic polymers have long been the source of reliable, efficient and affordable solutions in hair care formulation, global markets are striving for possibilities with higher appeal to consumers through formulations that are more natural and have less impact on the environment. The art of sculpting and molding hair has been re-invented with our high-performing SatiageI™VPC 512 texturizer. Delivering hold, as well as a pleasant and soft touch, this nature-derived solution presents new opportunities to cosmetic chemists to achieve sustainable market growth.

NATURE WITHIN - Red seaweed polysaccharides
SatiageI™VPC 512 texturizer is a hair styling agent consisting of carrageenans. Extracted from red seaweeds, carrageenans are highly flexible polysaccharides, well known for their gelling and thickening properties. Over the past 55 years, Cargill has developed a thorough expertise on the use of carrageenans in the food industry. Today, this technical platform allows us to design carrageenan-based systems, fine-tuned for different personal care applications whilst securing global procurement.

Functions

- Thickener/stabilizer
- Clear gel, thixotropic
- Good resistance to humidity
- No tacky/soft and pleasant hair feel after combing

Activity

- Light to medium fixative properties
- Film-forming agent
- Low to no flaking (thanks to a nature-derived solution patented by Cargill)

Ecocert validated

RHEOLOGY - A shear thinning behavior matching the expected standards

The viscosity and behavior of SatiageI™VPC 512 texturizer have been compared with the properties of a Carbomer/PVP system, one of the most classical benchmarks in hair styling applications. Both systems have shown similar results, with SatiageI™VPC 512 texturizer offering the consumer preference for this nature-derived ingredient.

In both cases, a shear thinning behavior is observed when increasing the shear rate over time. This property is important to ensure good spreadability during application.

Moreover, the two products have comparable yield points, which means they will provide similar properties in terms of suspension and stabilization (see figure 1).

FIXATIVE PROPERTIES - Delivering hold

SatiageI™VPC 512 texturizer has been tested against Carbomer/PVP in order to assess its curl retention properties. In this case, SatiageI™VPC 512 texturizer has provided better results than the synthetic standard of the market. After 90 min. at 90% of humidity, the curls obtained with SatiageI™VPC 512 are 20% shorter than the ones obtained with Carbomer/PVP, meaning that SatiageI™VPC 512 texturizer improves the curls' resistance to humidity (see figure 2).

SENSORIAL PROPERTIES - Achieving performance with a non sticky, pleasant feel

SatiageI™VPC 512 texturizer has proven to be clearly less sticky than Carbomer/PVP. Adhesiveness was measured with a TA-XT-Plus Texture Analyzer. The stickiness is proportional to the red hatched area shown on the graph (see figure 3). After applying the gel on the hair, drying and combing the hair curls, the feel of the hair is tested. This results in making the hair significantly softer after the application of SatiageI™VPC 512 texturizer than after the application of Carbomer/PVP.

APPLICATION

Hair styling gels

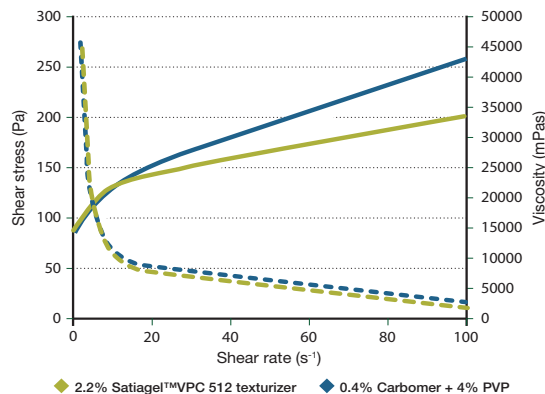
FORMULATION GUIDELINES

- INCI name: Carrageenan
- Form: beige, off-white-powder
- Recommended dosage: 1.5 - 3%
- pH: 5-9
- Compatible with all surfactants (except cationic)
- No neutralization required
- Can be processed in cold conditions

INSTRUCTIONS FOR USE

Disperse SatiageI™VPC 512 texturizer in a non-solvent medium (alcohol, polyols) under agitation. Then, add the water into to preparation while stirring. Continue stirring until homogenization

Figure 1: Shear stress and viscosity according to shear rate



Test protocol: viscosity measurement was done at 20°C and increasing shear rate with a Haake Rheostress 1. A beaker of 7ml and Z20 spindle were used.

Figure 2: High humidity curl retention test

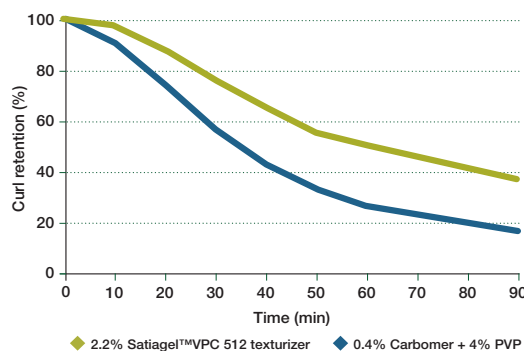
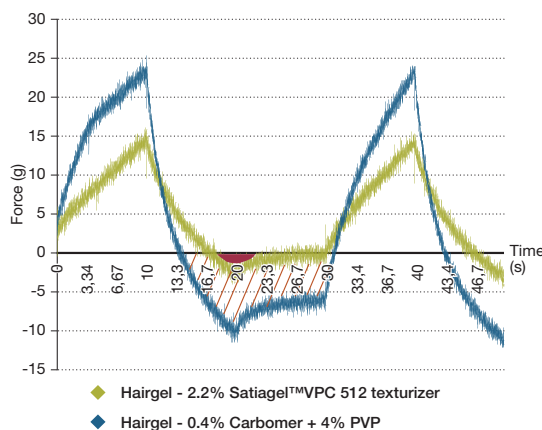


Figure 3: Adhesiveness measurement by TA-XT-Plus Texture Analyzer



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VPC512- (03.15)
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