

Guar

DEFINITION A self-hydrating quaternized guar that offers efficient thickening, and cationic conditioning without buildup.

FULL INCI Guar Hydroxypropyltrimonium Chloride

DESCRIPTION

In recent years, quaternized Guar has become a popular conditioner for both hair and skin cleansing products as well as emulsions and other personal care products. Quaternized Guar provides unrivalled conditioning without unpleasant polymer buildup after repeated use.

It is a unique conditioner derived from guar, a natural hydrocolloid. The word Guar, derived from sanskrit, means food for cows. Guar gum belongs to the legume family and is primarily cultivated on the Indian subcontinent. Small amounts are also grown in Texas and Oklahoma. The gum is derived from the endosperm of the guar bean, which contains protein, fiber, and moisture. Through multistage grinding and sifting, the endosperm is separated out and then ground to a fine powder called guaran.

Guar gum and its derivatives offer several advantages for personal care formulators:

- It is natural and derived from a renewable source;
- It conditions without causing polymer buildup in hair care products;
- It is biodegradable and nontoxic;
- It is economical compared to other cellulosic products, and
- It is the only one of the three main polysaccharides (the others are starch and cellulose) that hydrate in water without chemical or physical modification.

Quaternized Polymers are used in shampoos and conditioners to facilitate combability. They are used in skin care to improve skin feel,

State of the Art Ingredients • Fast Friendly Service

rubout, moisture content, and product aesthetics. The positively charged (cationic) molecule bonds with the negatively charged (anionic) skin and hair to form a polymeric film. They also make hair and skin alike feel softer and smoother to the touch. It is also known to increase the substantivity of silicone fluids onto hair and skin fibers.

SPECIFICATIONS

Appearance: Beige colored powder.
Storage: Tightly sealed, protected from air and moisture. Store in a cool dry place. Keep container tightly sealed.
Shelf Life: 2 years when properly stored and handled
Solubility: Water soluble
Polarity: Cationic

USAGE

- add to water phase
- 0.2-1%

GuarTHIX is normally stable between pH 3-9. It is only stable at a very high pH (10-12) in the absence of air. At a very low pH (1-2) it depolymerizes in a short period of time (translation: pilling). Personally, I would recommend using it at pH 5-9, as I have found that pilling can occur at a pH higher than 2 if larger percentages of Guar are incorporated (i.e. using .5-1% in an emulsion that contains a low pH milk in place of water).

GuarTHIX should be added to room temperature water with moderate agitation. The powder disperses readily, and after 30-60 minutes it is completely hydrated. The other components of the product are then added and the formula is adjusted to specification. Once hydrated, GuarTHIX can be heated to at least 50C with excellent tolerance, but be sure you have an adequate water phase in the formulation, so as not to "scorch" the hydrated GuarTHIX.