Innovative special ingredients for the cosmetics industry

Excellent conditioning and thickening properties

GUAR® LUVOCARE® conditioning polymers

the product complies with the Cosmetic Regulation No.1223/2009 regarding the CMR, Allergens, BSE / TSE, Nanomaterials;
the product complies with the Regulation 1907/2006/EC (REACH Regulation);
the product has never been tested on animals accordingly to Directive 2003/109/EC (VI amendment of Dir. 76/768/ EC),
come into force on 11/03/2009 for cosmetic ingredients;

LUVOCARE®GUAR range is provided with the following declarations:
• Absence of Phthalates
• Absence of Pesticides
• Volatile Organic Compounds (VOC’s) free

LUVOCARE®GUAR range has been analyzed to verify their conformity to cosmetic legislation requirements:
• Absence of Phthalates
• Absence of Pesticides
• Volatile Organic Compounds (VOC’s) free

LUVOCARE®GUAR are further provided with RMDS (Raw Material Data Sheet), a document which collects all information needed by our customers:
• legislation conformity
• toxicological information
• certifications
• declarations
• recommended dosage
• shelf-life
• storage conditions

LAW CONFORMITY

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**LUVOCAREGUAR conditioning polymers**

Guar gum is a sustainable natural polymer obtained by processing the endosperm of cluster bean (Cyanopsis tetragonoloba), principally grown in India, Pakistan, U.S, Australia and Africa. Chemically, guar gum is a gel-forming galactomannan obtained by grinding the inner part of the seed (endosperm portion).

**PRODUCT DESCRIPTION**

The backbone is a linear chain of β 1,4-linked mannose residues to which galactose residues are 1,6-linked at every second mannose, forming short side-branches. The presence of free-hydroxyl groups in the molecule, gives guar gum a strong tendency to form hydrogen bonds in water. When functionalised with cationic groups, guar gains a wide range of conditioning properties. The extraordinary characteristics of this sustainable material and the technological production process are the basis of LUVOCAREGUAR cationic polymers. LUVOCAREGUAR is a range of cationic naturally derivatived polymers with excellent conditioning and thickening properties.

**PRODUCT ADVANTAGES**

- Excellent dry hair conditioning
- Transparent grades
- Minimal build up
- Superior silicon deposition
- Reduces skin irritation
- Improvement of foam quality
- Foam boosting

**MECHANISM OF ACTION**

The mechanism of action is based on aggregation via flocculation of the polymers and subsequent deposition of actives. In the most widespread use, guar–cationic polymers and surfactants are mixed together in a single phase together with active ingredients. When diluted during normal use by the consumer, the guar–cationics form positive charged aggregates that deposit on the negative charged hair and skin surfaces. These aggregates entrap droplets of active ingredients such as emollient oils, silicones and UV filters which are then delivered on the hair and skin surfaces; improving wet and dry hair soft feel, conditioning and combability, reducing skin irritation and enhancing smoothness.

**PRODUCTIVE RANGE**

<table>
<thead>
<tr>
<th>INCI name</th>
<th>Function</th>
<th>Benefits and applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD-HC3</td>
<td>Conditioner</td>
<td>Self-hydrating version of GD-HC4.</td>
</tr>
<tr>
<td>GD-HC4</td>
<td>Conditioner</td>
<td>Good for hair and skin applications. Excellent wet comb conditioning. Improve soft feel to hair.</td>
</tr>
<tr>
<td>GD-HC7</td>
<td>Conditioner</td>
<td>Improves deposition of actives on hair. Maximum conditioning effect on hair. Highly substantive for hair and skin.</td>
</tr>
<tr>
<td>GD-HC11</td>
<td>Conditioner</td>
<td>Improves wet &amp; dry compatibility in shampoos and conditioners.</td>
</tr>
<tr>
<td>GD-CLEAR SC</td>
<td>Conditioner</td>
<td>Improves actives deposition on hair. Excellent wet comb conditioning.</td>
</tr>
<tr>
<td>GD-CLEAR HC</td>
<td>Conditioner</td>
<td>Very good conditioning and repairing properties on damaged and treated hair. Provides a silky skin feel in rinse-off products.</td>
</tr>
<tr>
<td>GD-TT</td>
<td>Conditioner</td>
<td>Improves smooth feel in body wash and styling products. Suitable for hydroalcoholic clear pumpable gels.</td>
</tr>
<tr>
<td>GD-AT</td>
<td>Conditioner</td>
<td>Optimum compatibility with polar solvents, including high percentage of ethanol.</td>
</tr>
</tbody>
</table>

What is guar gum?

Primarily used as a thickening agent, guar gum is a powdery substance produced from the ground endosperm of guar seed, when mixed with liquid, it has nearly eight times the thickening power of cornstarch.

Guar gum is a sustainable natural polymer obtained by processing the endosperm of cluster bean (Cyanopsis tetragonoloba), principally grown in India, Pakistan, U.S, Australia and Africa. Chemically, guar gum is a gel-forming galactomannan obtained by grinding the inner part of the seed (endosperm portion).