



514, 6th Floor, Adamji Bldg., 413, Narshi Natha Street, Mumbai - 400 009. (INDIA).

Tel. : 0091-22-2343 9093 | Fax : 0091-22-6634 9992 | E-mail : info@hajexports.com | Web : www.hajexports.com

TECHNICAL DATA SHEET

Product Name: HAJ PQ 11

CTFA (INCI) Designation (proposition): Polyquaternium 11

PRODUCT DESCRIPTION

PQ 11 is an ingredient developed specifically for cosmetic and personal care products.

Chemical name :

Quaternized copolymer of vinylpyrrolidone (VP) and dimethylaminoethylmethacrylate (DMAEMA).

PRODUCT CHARACTERISTICS

PQ 11 is supplied in easy-to-handle **aqueous solution**.

It contains preservatives: 1% Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Propylparaben.

Appearance clear to pale yellow liquid

Odor	very slight
Polymer charge	cationic
Active content	19 – 22 %*
pH (as supplied)	5 – 7*
Viscosity (Brookfield LVT 4 -6 rpm)	10000 – 15000 cps*
Shelf life	12 months

PQ 11 can be easily incorporated in formulations due to complete water solubility.

PQ 11 is widely compatible with any kind of surfactants including anionic and amphoteric ones. This makes possible transparent and crystal clear shampoos and toiletries products.

PQ 11 is compatible with ethanol for the formulation of hair care mousse and spray.

COSMETIC APPLICATIONS

PQ 11 is a cationic polymer which forms an electrostatic combination with the negatively charged keratin.

In hair care products, PQ 11 can:

- improve wet and dry compatibility
- increase shine, softness and body
- form a non-tacky and continuous film
- good curl retention performance
- enhance setting properties

PQ 11 is an effective conditioning agent and it can be formulated into hair styling mousses, lotions and gels, conditioners, treatment products and shampoos.

PQ 11 is also suitable in skin care products such as: liquid soaps and shower gels, shaving products and body lotions.

CONCENTRATION USE

PQ 11 should be used at concentrations from 2% to 5% in shampoos and conditioners, and from 5% to 10% in mousse and gels formulations.

STORAGE

PQ 11 should be stored at a temperature < 35°C.

PACKAGING

PQ 11 is available in 25 kg Carbouys,

Formulation Guidelines

1. Conditioning with setting properties

An interesting dual action concept is to combine a conditioner and setting lotion into one product. For this product category, a mild conditioner that does not build up is required. A fatty amidoamine salt was found to be a better choice than a quaternary ammonia compound because it will rinse more readily from the hair. For the setting properties, polyquaternium 11 prepared by the reaction of diethyl sulfate and a copolymer of vinyl pyrrolidone and dimethyl aminoethylmethacrylate was used. Although the effect is not the same as applying the two products separately, the final product offers an excellent compromise.

Conditioning with setting properties

Ingredients:	%Wt.
Stearmidopropyl dimethylamine lactate (25%)	4.0
Polyquaternium 11	8.0
Cetyl alcohol	0.5
Preservative	q.s.
Water, dye, fragrance	q.s. to 100.0

Procedure: Completely disperse polyquaternium 11 in water. Add stearamidopropyl dimethylamine lactate and cetyl alcohol and heat to 70°C. When the cetyl alcohol is melted and dispersed, cool to 45°C. Add remaining components and cool to room temperature.

.....

2. Clear Wash Out Conditioner

An isostearyl amidoamine salt – high molecular weight cationic salt provides a clear product which is water white and almost odourless. The viscosity is built with hydroxyethylcellulose and polyquaternium 11 which also improves detangling.

Ingredients:	%Wt.
Stearmidopropyl dimethylamine lactate (25%)	8.0
Polyquaternium 11	2.0
Hydroxyethyl cellulose	1.0
EDTA (40%)	0.2.
Water, dye, fragrance ,preservative	q.s. to 100.0

Precedure:

Slowly add hydroxyethylcellulose at room temp to water under rapid agitation., when it completely hydrated (approx 1 Hr), add PQ 11, then add Stearmidopropyl dimethylamin lactate (25%), heat to 40°C , add EDTA , preservative, fragrance and dye. Blend until clear and cool.