

## **JEESILC® CQ**

Silky Silicone Quat for Hair Care

### **Introduction**

**Jeesilc® CQ** is a carefully balanced mix of high molecular weight water-soluble silicone compounds carefully chosen that, when combined with cetyltrimethylammonium chloride, imparts superior conditioning and manageability to hair while still being mild and gentle with low levels of eye irritation. **Jeesilc® CQ**, a cationic conditioning agent, provides conditioning to the hair as well as the skin and also acts as an exceptional emulsifier.

**Jeesilc® CQ** contains a unique silicone quat that provides excellent hair conditioning properties in an easy to formulate, water-soluble material. It is a very high molecular weight silicone polymer that has been functionalized to give it alkyl quaternary ammonium groups. It provides all the well-known silicone benefits of:

- lubrication of the hair shaft to provide smoothness and combability
- protection from humidity
- a silky, conditioned feel
- adds shine

The positive charge of the quaternium groups bonds with the natural negative charge of the hair, making it substantive. This ensures its conditioning effects last for an extended period of time when compared to un-quaternized silicones.

**Jeesilc® CQ** combines the silicone quat with cetrymonium chloride, which provides additional and complementary benefits:

- its positive charge neutralizes the hair's static charges which reduces fly-aways
- helps prevent hair breakage
- adds excellent detangling benefits and wet and dry combing benefits
- helps reduce split ends and damage

The combination of ingredients in **Jeesilc® CQ** provides a complete package of hair conditioning benefits in an easy-to-use, water-soluble product.



### **KEY BENEFITS:**

- Superior conditioning and softening
- Easy to use
- Improves both wet and dry combability
- Non-irritating
- Provides outstanding smoothness of hair
- Minimal effect on shampoo viscosity
- Does not impede foam
- Substantive to hair
- Non-greasy/Non-sticky feel
- Improves shine and gloss

Typical Properties	
INCI Name	Water (and) Dimethicone PG-Diethylmonium Chloride (and) Propanediol (and) Cetrimonium Chloride
Appearance	Clear light yellow liquid
Color, Gardner	1
Viscosity, cps	150
Recommended Use Level	0.25 - 5.0%

Solubility (1%/10%)	
Water	Soluble/Soluble
IPA	Soluble/Soluble
Mineral Oil	Insoluble/Insoluble



#### FORMULATING GUIDELINES:

In W/ O or O/W systems is best to add **Jeasilc® CQ** at the end of the emulsification process, with preservatives and fragrance.

In surfactant systems **Jeasilc® CQ** can be added to the water prior to the surfactants or at the end of the formulation along with preservatives and fragrance.

**Jeasilc® CQ** is not temperature sensitive, but it is preferable to be added at < 55° C.

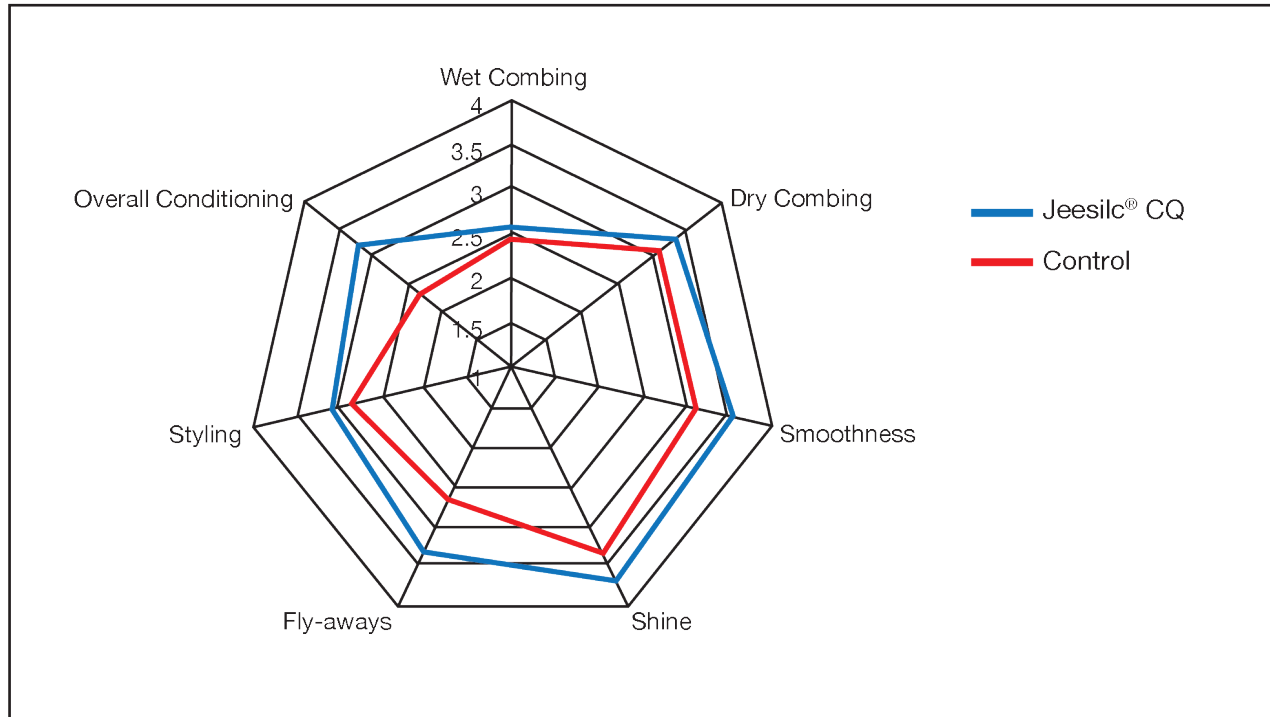


#### PRODUCT APPLICATIONS:

- Hair Conditioners
- 2-in-1 Shampoos, clear and opaque
- Baby shampoos
- Hair styling products
- Body washes

## Application Data

A simple 2-in-1 shampoo formulation containing 5% **Jeesilc® CQ** was evaluated by a 9-person panel compared to a control formulation without **Jeesilc® CQ**. The panelists, all females with medium to long hair, were asked to shampoo half of their heads with each product, rinse, repeat, and blow dry. They then evaluated their hair for ease of wet combing, ease of dry combing, smoothness, shine, fly-aways, ease of styling, and overall conditioning on a 1 to 5 scale (5 = best). The average ratings are shown in the following spider chart.



## Results

The formulation containing **Jeesilc® CQ** was rated better than the control formulation for all properties, with overall conditioning and fly-aways showing statistically significant improvements ( $p=0.01$  and  $0.05$  respectively). Taken together, the totality of the scores shows that **Jeesilc® CQ** will impart substantial conditioning properties to any simple shampoo formulation.

**Jeesilc® CQ** gives you the additional benefit of formulating clear, functional products in addition to opaque emulsions and creams.



*Please contact your JEEN Representative or visit our website at [www.JEEN.com](http://www.JEEN.com) to learn more about our products, our technologies, and how we can help you reduce your carbon footprint and produce a greener product.*

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