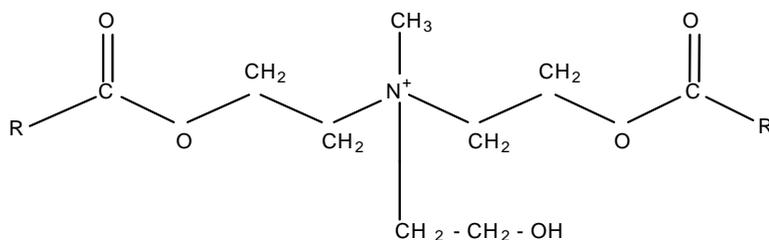


Product Name

STEPANQUAT® GA 90



$\text{CH}_3 \text{OSO}_3^-$

R = partially hydrogenated palm

Chemical Structure

INCI Name

Dipalmitoylethyl Hydroxyethylmonium Methosulfate

CAS Registry N°:

91995-81-2

Applications

STEPANQUAT GA 90 is a very mild cationic surfactant ideally suited for hair conditioners and skin care products as well as the formulation of household and industrial fabric softeners from 3% viscous to 18% fluid active concentrations.

STEPANQUAT GA 90 is fully palm based therefore designed for formulations labelled as natural based products.

In hair conditioners, STEPANQUAT GA 90 provides good detangling, excellent wet and dry combability, good antistatic, no build-up, efficiency on hair damaged by aggressive treatments and styling properties. In combination with silicones, STEPANQUAT GA 90 exhibits excellent conditioning properties.

In skin care products, STEPANQUAT GA 90 provides very good moisturizing properties, emulsifying characteristics for O/W emulsions and excellent substantivity on the skin allowing very pleasant film formation with non-tacky after-feel.

In Fabric Softeners, STEPANQUAT GA90 provides:

- Excellent softening without that "greasy feeling",
- Good antistatic properties,
- Good rewetting properties,
- Do not spoil fabric colours (non yellowing),
- Provide easier ironing and drying.

End product uses:

- Hair rinse conditioners,
- Leave-on hair conditioners,
- Frequent use hair conditioners,
- Damage hair treatment,
- Skin moisturizers,
- Cationic skin care creams and lotions,
- After shave lotions
- Fabric softeners

June 2007
Supersedes

Feb. 2007
Page 1 of 2



Typical Properties

Appearance at 20°C.....	beige paste
Appearance at 50°C.....	liquid
pH, 5% in water/IPA (50/50).....	3
Solids, % by wt.....	90
Cationic active matter (meq/g)	1.07
Color, Gardner.....	< 4
Density at 40°C, g/cm ³	0.960
Pour point, °C	38
Flash point, SETA, °C.....	23
Viscosity at 40°C, mPa.s (Brookfield RVT M4/V100)....	330
IPA content, %	10

Formulations

A formulary is available upon request.

Preservative Compatibility

Preservatives compatible with cationics, stable and effective at pH between 3 and 4.5 should be compatible with STEPANQUAT GA 90.

STEPANQUAT GA 90 is not compatible with isothiazolinone derivatives (i.e. Kathon CG).

Biodegradability

STEPANQUAT GA 90 complies with the biodegradability criteria as laid down in regulation (EC) No.648/2004 on detergents.

Storage & Handling

STEPANQUAT GA 90 should be handled with care and used away from sparks and open flame because it is flammable. Use in a well ventilated area. Contact with the eyes and prolonged contact with the skin should be avoided. Use gloves and safety goggles when handling STEPANTEX GA 90.

Drums storage Information: It is recommended that drums of STEPANQUAT GA 90 be stored in sealed containers at temperatures between 4°C and 50°C. Avoid heating to temperature higher than 70°C and avoid local overheating. Product must be heated to 50°C and stirred before use to ensure product is homogeneous before use.

The colour and odour of STEPANQUAT GA 90 are susceptible to degradation as a result of exposure to high temperature (> 60°C) over extended periods of time (greater than several days), particularly in the presence of air.

Standard packaging: STEPANQUAT GA 90 is available in drums (190Kg), intermediate bulk quantities (950 kg) and in bulk quantities.

Clearances

STEPANQUAT GA 90 is listed in Europe (EINECS 295-344-3), USA (TSCA 157905-74-3), Canada (DSL 157 905-74-3).

Stepanquat® is a registered trademark of Stepan Company.

Additional Safety Information

A Material Safety Data Sheet is available upon request.

For Additional Assistance

For applications or product handling assistance, call our Corporate Offices at (33) 4-76-50-5160.
For ordering assistance, call our Customer Service Department at (33) 4-76-50-5100.

Nothing contained herein grants or extends a license, express or implied, in connection with patents, issued or pending, of the manufacturer or others. The information contained herein is based on the manufacturer's own study and the works of others. The manufacturer makes no warranties, expressed or implied, as to the accuracy, completeness, or adequacy of the information contained herein. The manufacturer shall not be liable (regardless of fault) to the vendee's employees, or anyone for any direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of such information.

June 2007
Supersedes

Feb. 2007
Page 2 of 2

Stepan

Stepan Europe

Chemin Jongking
B.P. 127
38343 Voreppe Cedex France
Telephone (33) 4-76-50-5100
Fax (33) 4-76-56-7165