

Synthalen® CR

Cationic thickening agent

Chemical and physical characteristics (*)

Chemical Name	Quaternary acrylic polymer
INCI Name	Polyquaternium-37
Appearance	white to beige powder
Bulk Density	0.4-0.5 g/cm ³
pH (1% dispersion in water)	3.5-4.5
Viscosity (mPa·s) of dispersions in water (Brookfield RV, 20 rpm, 25°C)	

% Dispersion	Viscosity		Spindle
	Min.	Max	
0.5	7,000	13,000	5
1.0	15,000	25,000	6

(*) Typical values not qualified for quality control purpose

Applications

SYNTHALEN® CR is a synthetic cationic polymer that can be used in cosmetic applications as a thickening, suspending, and conditioning agent. Synthalen CR is compatible with a wide range of cationic and nonionic surfactants.

SYNTHALEN CR has a high yield value, similar to a type 940 carbomer. The viscosity of an aqueous dispersion remains virtually unchanged at pH 4 up to 60 °C. It has a remarkable compatibility with ethanol, with only a limited drop in viscosity at up to 80% of ethanol. It provides remarkable stabilization to cationic emulsions.

SYNTHALEN CR dispersions are characterized by medium viscosities in a broad range of pH (Fig. 1 and 2). Its effectiveness is particularly evident at low pH. Because of these characteristics, SYNTHALEN CR can be used in conditioning products for hair and skin and in skin-care cosmetics formulated at low pH.

Electrolytes can cause a serious drop in viscosity.

Use

SYNTHALEN CR does not need neutralization and, when dispersed in water, quickly forms a gel. Dispersion should be made by slow addition of the powder under agitation. If done correctly, the process requires only a few minutes. Avoid turbulent agitation to prevent the trapping of air in the finished product. Typical gels prepared with SYNTHALEN CR neither prevent nor promote the growth of microorganisms; therefore, the addition of a suitable preservative system is advisable.

Fig. 1 - Viscosity vs % Polymer
(Aqueous dispersion, pH 4, 25 °C)

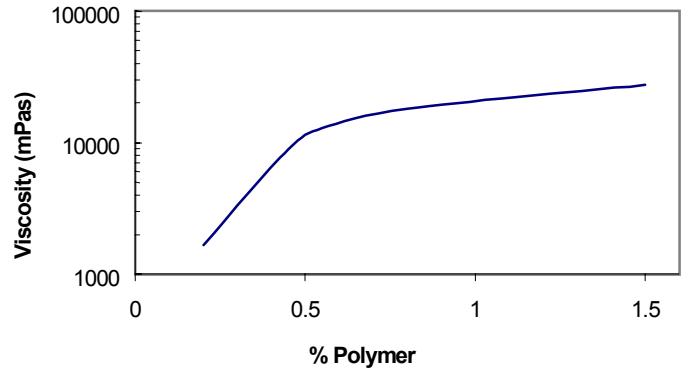
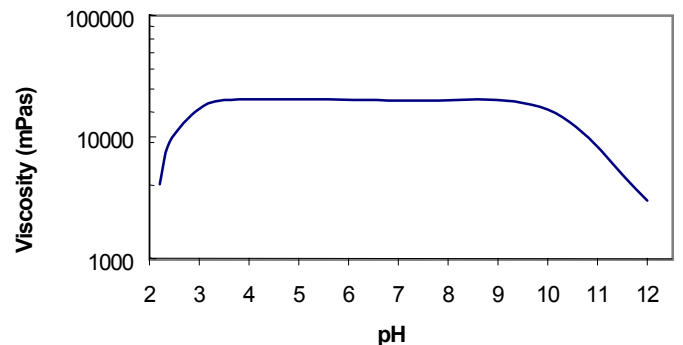


Fig. 2 - Viscosity vs. pH
(1% aqueous dispersion, 25 °C)



Toxicological Information

SYNTHALEN CR is not known to be hazardous, as long as standard industrial hygiene practices are followed.

Transport, storage and handling

Labeling: The product is not classified as hazardous according to international transport regulations.

Avoid breathing the dust and contact with skin, eyes and mucous membranes. In case of contact, wash immediately with plenty of water.

Store in the original closed container in a cool, dry place.

For further information please refer to safety data sheet.

The information in this data sheet is based on our present and best knowledge. However we make no warranty, whether expressed or implied, including warranties of merchantability, fitness for a particular use or purpose. The product must be tested by the user according to his needs, production and application conditions and purposes. We do not assume any responsibility for infringement of third parties patent rights, which may arise from the use of the product. For industrial use only. USA.JP.SynthCR.0901