



CARBOMED 940 EZ

INCI NAME:	CARBOMER 940
CAS NUMBER:	9007-20-9, 9003-01-4

CARBOMED 940 EZ is a high molecular weight polymer of acrylic acid crosslinked with a polyfunctional agent (Carbomer). It is a white, fine, rather hygroscopic powder.

CARBOMED 940 EZ is not soluble in water, but it can be dispersed in water and in polar solvents forming a hazy solution. The pH of water dispersions is around 3,0.

When compared to other commercially available Carbomers with the same thickening properties, CARBOMED 940 EZ takes up to 75% less time for water dispersion using common Lightnin' Mixer. It also has reduced clumps formation preventing long mixing cycles. Normal dispersion time is 15 -20' for a lab scale batch.

CARBOMED 940 EZ can be neutralized with organic or inorganic bases, giving place to gels with different characteristics, depending on the used quantity of base. Said gels have filming and protective properties and do not produce irritations or allergies.

CARBOMED 940 EZ is widely used in personal care applications.

PHYSICAL / CHEMICAL PROPERTIES	
Appearance:	fine powder
Colour:	white
pH (0,5 w.d.):	2,5 - 3,5
Viscosity (0,5 w.d. - pH 7,0)	40.000 - 60.000 cPs
Residual solvent (methylene chloride):	0,1% max.
Benzene:	absent
Loss on drying:	2,0% max.
Heavy metals:	20 ppm max.
Clarity:	> 92%



CARBOMED 940 EZ OFFERS THE FOLLOWING ADVANTAGES:

Production of very substantial gels at low concentrations.

Perfect spreadability and pleasant touch of films on skin.

Compatibility with most substances used in personal care products.

Excellent emulsifying, stabilizing, dispersing and suspending power.

Possibility of producing gels not only in water but in organic solvents too.

Stability of gels in time and to changes of temperature.

DISPERSION METHODS

1. Addition to aqueous and hydro alcoholic solutions

CARBOMED 940 EZ is added slowly into rapidly agitating water. The mixing should be continued until all particles are dispersed forming a hazy solution. The use of high shear mixer should be avoided because it could result in viscosity loss. Finally, the neutralizing agent is added under mixing. At this stage, mixing with care to avoid air trapping.

2. Addition into emulsions

CARBOMED 940 EZ can be dispersed in the oil phase (which may include molten waxes and oils) by adding it slowly while stirring. It will result in a smooth and homogeneous dispersion. The dispersion then should be added to the water with the neutralizer, mixing until a smooth and homogeneous emulsion is obtained.