

TECHNICAL DATA SHEET**CARBOMER 990****INCI Name: Carbomer****CAS No: 9003-01-4****Description:**

CARBOMER 990 is a synthetic high molecular weight cross linked polyacrylate polymer. It is very efficient Rheology modifier, which provides high viscosity and forms sparkling clear water or hydro-alcoholic gels.

It is very efficient thickener among all the grades, having an extremely short flow property. It is suitable for use in high viscous liquids or gels for cosmetics and pharmaceutical industries.

Typical Applications:

- Hair styling gel
- Hydro-alcoholic gel
- Moisturizing gel
- Bath gel
- Tooth paste
- Shampoos
- Shaving gel, after shaving lotion
- Moisturizing cream and sun screen lotions
- Pharmaceutical gels & ointment.
- Cleaning cream
- Skin fresher

Typical Physical Properties:

Parameter	Typical Properties
Appearance	White, fluffy powder
Odor	Slight characteristic odor
Brookfield Viscosity (25°C, 0.5% aqueous gel neutralized)	45000 to 70000 mPa.s
Brookfield Viscosity (25°C, 0.2% aqueous gel neutralized)	10000 – 30000 mPa.s
Loss on drying	NMT 2%
Residual Solvent (Ethyl Acetate) (Cyclo Hexane)	NMT 0.45%

Advantages:

Thickening efficiency	High viscosity at low concentration
Uniform performance	Carbomer gives uniform viscosity performance, while natural gums vary in their performance.
Temperature stability	There is no significant effect of temperature on viscosity performance
Unaffected by aging	Excellent shelf life
Safety	Years of successful use of carbomer
Microbial resistance	Resists bacterial attack and do not supports mould growth.
Versatility	Although primarily used in aqueous system with neutralization, it can also be used in solvent systems, with or without neutralization.
Elegance	Smooth and luxurious feeling

Regulatory Status:

United States (USP/NF)

Carbomer Homopolymer

Europe (Ph. Eur.)

Not covered by the Carbomer Monograph Polymer in the European Pharmacopeia which includes a stipulation that benzene is limited to 2 ppm.

Japan (JPE)

Carboxyvinyl Polymer

Neutralizers:

Carbopol polymers are dry, highly coiled acidic molecules. After dispersion in water, it begins to hydrate and partially uncoil. Maximum thickening can be achieved by converting the acidic Carbopol polymer to neutral pH.

Neutral pH is easily achieved by neutralizing the Carbopol range with recommended neutralizers to adjust the pH of Carbopol range solution are:

- Sodium hydroxide (NaOH),
- Potassium hydroxide (KOH),
- Triethanolamine (TEA),
- Ammonia (28%) & other alkali.

Toxicity:

Carbopol range is high molecular weight polymer. It does not absorbed by body tissues and is totally safe for human oral consumption.

Test for toxicological tolerance shows that it does not have any pronounced, physiological action and is non-toxic.

Storage and handling:

Store in a tightly closed container and away from direct contact with water and excessive humidity condition.

Shelf life:

Five year from the date of manufacturing in intact condition.

Packing:

20 kg net in corrugated box with polyethylene liner.