ISO 9001:2015, EXCiPACT CERTIFIED
DATE OF REVISION: MAY, 2018

ACRYPOL 934
(Carbomer 934)

INCI Name: Carbomer
CAS No: 9003-01-4
US DMF Registration: 20139, 9th January, 2007

Description:
Acrypol 934 is a synthetic high molecular weight cross linked polyacrylate polymer. It offers excellent stability at medium and high viscosity and has short flow properties in aqueous system. It produces thick formulations for opaque gels, emulsions, creams and suspensions. It is extensively used in the pharmaceutical topical formulations and cosmetic creams.

Typical Applications:

- Gel, Lotions and Ointments
- Oral liquids, Suspension and Emulsion
- Topical Application
- Hair care
- Taste Masking
- Creams
- Hand, body and face lotions
- Sustained release formulation by matrix system.
- Ophthalmic gel and eye lotion.
- Transdermal drug delivery.

Typical Physical Properties:

Parameter	**Typical Properties**
Appearance	White, fluffy powder
Odor	Mildly acidic
Brookfield Viscosity (25°C, 0.5% aqueous gel neutralized)	30,500 – 39,400 mPa·s.
pH 1 wt% dispersion	2.5 -3.0
pKa	6.0 ± 0.5
Carboxylic acid content	Between 56.0 % to 68.0%
Temperature Stability	Upto 75°C
Residual Solvent (Benzene)	NMT 0.5%

Advantages:

- High viscosity at low concentration.
- There is no significant effect of temperature on viscosity performance.
- Carbomer gives uniform viscosity performance.
- Excellent shelf life.
- Years of successful use of Carbomer.
- Resists bacterial attack and do not supports mould growth.
- Although primarily used in aqueous system with neutralization, it can also be used in solvent systems, with or without neutralization.
- Smooth and luxurious feeling.

Regulatory Status:
United States (USP/NF)
Carbomer 934
Europe (Ph. Eur.)
Not covered by the Carbomers Monograph Polymer in the European Pharmacopeia which includes a stipulation that benzene is limited to 2 ppm.
Japan (JPE)
Carboxyvinyl Polymer

Neutralizers:
Acrypol 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 Acrypol polymer to neutral pH.

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

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

Toxicity:
Acrypol 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:
Three years from the date of manufacturing in intact condition.

Packing:
20 kg net in corrugated box with polyethylene liner.