

SHREEPOL (Carbomer IP/BP/USP)

SHREEPOL 934 / 974

SHREEPOL 934 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of Carbomer". It off excellent stability at high viscosity and produces thick formulation for opaque gels, emulsions, creams and suspension SHREEPOL 934 polymer has short flow properties in aqueous systems. It gives permanent stability at high viscosity.

SHREEPOL 974 is benzene-free grade of SHREEPOL 934.

It is used for thick formulation such as viscous gel, thick emulsions and heavy suspension for topical preparation, hair care, skin care and moisturizing creams. It is extensively used in the pharmaceutical topical (ointment) formulations.

Features and benefits of SHREEPOL 934/974 polymer are as below:

- ❖ Short flow properties
- ❖ Opaque gel
- ❖ Medium viscosity
- ❖ High suspending ability

Recommended Applications:

- Gel, lotion and ointment.
- Topical applications.
- Hare care
- Skin care.
- Suspension and emulsion.
- Taste masking.

SHREEPOL 934P / 974P

SHREEPOL 934P is a high purity grade of polyacrylicacid, which confirms to USP/NF specifications of "Carbomer". It is special used in oral care formulations of Pharmaceutical industries.

It can be used in liquid or semi-solid oral dosage forms and also used as thickening, suspending and emulsifying agent. It is use in tablets formulations for binding and sustained release formulations.

SHREEPOL 974P is benzene-free grade of SHREEPOL 934P.

Features and benefits of SHREEPOL 934P/974P polymer are as below:

- ❖ Medium viscosity
- ❖ Short flow properties
- ❖ Opaque gel
- ❖ High suspending ability

Recommended Applications:

- Gel, lotion and ointment.
- Sustained release formulation by matrix system.
- Oral liquid, suspension and emulsion.
- Transdermal (skin) drug delivery.
- Ophthalmic gel and eye lotion.
- Taste masking.

SHREEPOL 940 / 980

SHREEPOL 940 polymer is a cross-linked polyacrylic acid, which conforms to USP/NF specification of "Carbomer". It is an extremely efficient rheology modifier capable of providing high viscosity and forms sparkling clear water or hydroalcoholic gels and creams. It is most efficient thickener among all the SHREEPOL grades, having an extremely short flow property. It is suitable for use in making high viscous liquids or gels for cosmetics.

SHREEPOL 980 is benzene-free grade of SHREEPOL 940.

SHREEPOL 940 polymer short flow (non-drip) properties are ideal for applications such as clear gels, hydroalcoholic gels, cream

Features and benefits of SHREEPOL 940 / 980 polymer are as below:

- ❖ Short flow properties
- ❖ High clarity
- ❖ High viscosity
- ❖ High suspending ability

Recommended Applications:

- Hair styling gels
- Bath gels
- Creams
- Shampoos
- Shaving gel and sunscreen lotion.
- Hydroalcoholic gels
- Hand, body and face lotions.
- Moisturizing gels.
- Tooth paste

- Room freshner gel
- After shave lotions
- Hair, skin and moisturizing creams

SHREEPOL 941 / 971

SHREEPOL 941 polymer is a cross-linked polyacrylicacid, which confirms to USP/NF specifications of “Carbomer”. It give permanent emulsions and suspensions at low viscosity, even with ionic systems. The gels produced with this polymer has excellent clarity. In ionic systems, it performs better than any of the others SHREEPOL grades.

SHREEPOL 941 polymer is more efficient than SHREEPOL 934 and 940 polymers at low and moderate concentrations. In hydrogen bonding thickening mechanism, it is more effective than the other SHREEPOL grades.

It is used in cosmetic industries for emulsion stabilization. It is used in solid dossge form as a binder and in sustain-releas formulations. Suggested applications include clear gels, hydro-alcoholic gels and lotions.

SHREEPOL 971 is benzene-free grade of SHREEPOL 941.

SHREEPOL 971P is a high purity grade of polyacrylicacid, used in oral care formulations of pharmaceutical industries.

SHREEPOL AQ – 1

It is a liquid acrylic rheology modifier, designed to suspend, stabilize, thicken and enhance the appearance of surfactant – based cosmetic, pharmaceutical and house – hold formulation. It is very much useful where surfactant level is high. It is a cost – effective and easy – to – use polymer.

Recommended applications :

- ❖ Shampoo
- ❖ Hand sanitizers
- ❖ High electrolyte formulations
- ❖ Cleaning Products
- ❖ Ketoconazole
- ❖ Dish Washing Gel
- ❖ Hydro – alcoholic gels
- ❖ Cleanser
- ❖ Bath gel
- ❖ Face wash
- ❖ Shower Gel

Advantages :

- Thickening efficiency – High Viscosity at low concentration.
- Uniform performance – Shreepol 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 Shreepol
- Microbial resistance – Resists bacterial attack and does not support mould growth.
- Versatility – Although primarily used in aqueous systems with neutralization, it can also be used in solvent systems. With or without neutralization.
- Elegance – Smooth and Luxurious feeling.

Neutralizes :

Shreepol polymers are dry, highly coiled acidic molecule. After dispersion in water, it begins to hydrate and partially uncoil. Maximum thickening can be achieved by converting the acidic shreepol polymer to a salt. It is easily achieved by neutralizing the Shreepol range with a common base such as sodium hydroxide (NaOH) or triethanolamine (TEA). The recommended neutralizers to adjust the pH of Shreepol Range Solution are: Sodium hydroxide (NaOH), Potassium hydroxide (KOH), Tri-ethanolamine (TEA), Ammonia (28 %), Diisopropanolamine, Aminoethyl Propanol (AMP), Ammonium hydroxide (NH₄OH), Arginine etc. It is preferable to add strong bases previously diluted with water at a concentration not more than 10.0-20.0%.

AMSOL

[Polyoxyl 40 Hydrogenated Castor Oil (IP/BP/USP)]

Amsol grades are chemically castor oil derivatives. They are non-ionic solubilizers and emulsifying agents obtained by reacting hydrogenated castor oil with ethylene oxide. They consist of hydrophobic and hydrophilic parts. They are almost tasteless and odorless. They are used as solubilizer for fat-soluble vitamins, perfumes, essential oils and other hydrophobic pharmaceuticals. They have the ability to solubilize or emulsify oil-soluble ingredients and convert them into clear transparent solutions or stable emulsions respectively. It improves the solubility of poorly soluble drugs (BCS class II and class IV).

Amsol Grades:

Amsol A-40

Amsol A-50

Mechanism of Amsol:

- Modify the polarity of Water.
- After various properties like density, surface tension, viscosity, boiling point and specific heat of solution in various way
- Wetting the surface of solutes by lowering the contact angle between the solute and the wetting liquid
- Increases the solvation / hydration of solutes
- It solubilizes the insoluble particles by converting them into small(nano) size particles with or without heating

Application:

Solubilizer

Amsol range improves water solubility of major water insoluble products. It is compatible with most of all ingredients. It helps to solubilize different pharmaceutical active ingredients like Acetaminophen, Bromhexidine HCL, Dextromethorphan HBr, Povidone iodine, Loxapine Succinate, Vitamins like vitamin A palmitate, vitamin D, Vitamin E acetate etc. It is also used as solubilizer and stabilizer for oils and perfume in cosmetic industries.

Dissolution Improver

It is generally used between 3.0% to 5.0% w/w of API to improve dissolution of poorly soluble active ingredients like Cefuroxime Axetil, Cefpodoxime proxetil, Albendazole etc.

It should be mixed with API with or without heating and then dissolved in vehicle (Aqueous / Non Aqueous).

Amsol range is excellent versatile nonionic emulsifying agent. It emulsifies major hydrophobic substances like fatty acids, fatty alcohols, mineral oil etc. it is suitable to obtain O/W cream and lotions, also can be used as stabilizer for skin care. It has an excellent emulsify ability, suitable for emulsification of mineral oil, natural oil, stearic etc. it can obtain a steady system when used alone.

Moisturizer

Amsol range improves moisturizing effect and soft feeling.

Transparency Improver

Amsol range solubilizes insoluble oily substances in aqueous system and hence it improves transparency and shining. In cosmetic formulation, it impacts elegance appearance of products such as shaving gel, hair styling gel, hand wash gel etc. In pharmaceutical syrup formulations, it improves transparency.

Volatility retardant

Amsol range retards volatilities of solvents. It can be used for highly volatile products like after shaving lotion, perfumes etc. to retain its effect for longer period.

Film Former

Amsol range improves film forming capacity and flow properties. Amsol is preferred in cream, lotion, lipstick etc. to improve film forming capacity.

Masking Agent

Amsol masks unpleasant taste and odour of typical formulations like pharmaceutical syrup containing alcohols and suspension like artemether and lumefantrine suspension.

Adhesion Reducer

Amsol reduces adhesion and chipping properties of oils. It gives smooth feeling on application like in all pharmaceuticals and cosmetic (creams, and lotions, hair oil etc.) formulations.

Aerosol Formulations

Amsol improves solubility of the propellant in aerosol in aqueous phase.