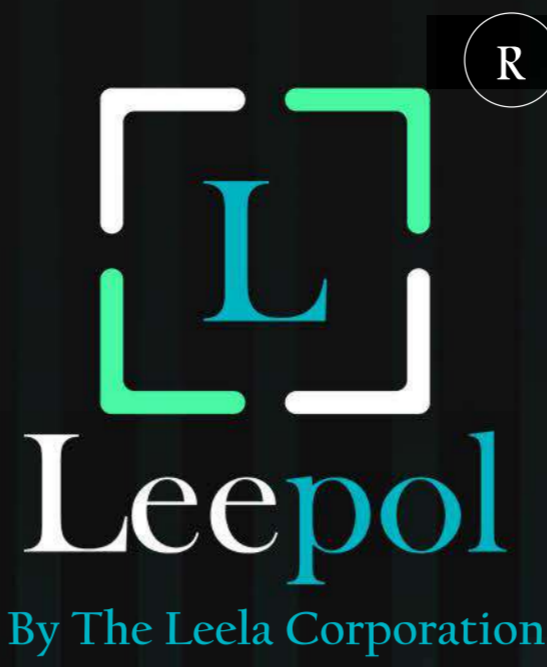


PRODUCT OF INDIA



WELCOME TO THE WORLD OF LEEPOL

Leepol is an advancement of
Coating Material Science &
Polymer Chemistry.



ABOUT US



VISION

The Leela Corporation dedicates it self to offering cutting edge polymer technology solutions. The company shall strive to be the leader in the segments by focusing on R & D.

MISSION

We are committed to exceeding the expectations of our customers by providing quality products and exceptional services along with continuous improvement and innovation with positive attitude.

RESEARCH & DEVELOPMENT

The Leela Corporation's R & D center/ application lab has a team of scientists working round the clock for better application for Pharmaceutical, Personal Care, Home Care, Cosmetic and other industries. Through research, we offer better and customized solutions that satisfy customers need sand expectations. It has also polymer R & D center Plant, Mehsana, Gujarat, India. Through research, we design newer and valuable polymers which are applicable to Pharmaceutical, Personal Care, Home Care and Cosmetic industries. The scientists works in the field of novel drug delivery system, nanotechnology, modified release, sustained release, taste-masking, coating technology, encapsulation, microsphere, tailor-made application etc. to provide the effective and accepted product slike tablet, suspension syrup, ointment, gel, cream, lotion, shampoo etc...

TECHNICAL SUPPORT

We always stand to support our valuable customers by giving them technical assistance and doing R & D in our facility.
Capable technical team for knowledge, technical and scale-up support.
Technical seminars.
Innovative technology driven company.
Very well established systems and processes.
Capability to give tailor-made polymers for various applications.

MANUFACTURING FACILITY

All polymers are manufactured in automatic reaction system plant. Totally automated operations ensure the material never comes in contact with hands right from the raw material stage to finished product stage. Air circulation takes-care of zero pollution. Full air and dust control. The plant runs by skilled, experienced and well qualified chemical engineers, chemists and operators.

MARKETING

Our marketing policy is to directly reach to customer, support them with technical help up to standardization of the application.
Marketingteam comprises of well experienced persons with appropriate technical skills.

ANALYTICAL FACILITY

Leepo has advance instruments at R & D as well as at Plant like HPLC | GC | FTIR | Stability chamber | UV Spectrophotometer | Brookfield viscometer Auto Dissolution apparatus | Disintegration test apparatus etc.

ACCREDITATION

- ISO Certificate • Kosher Certificate • Halal Certificate • GMO Certificate • GMP Certificate • GLP Certificate • Drug License
- Reach Certificate • Excipact Certificate

Leepol[®] Carbomer

Acrylate Co-polymer

Polyacrylic Acid

Acumer

Sokalan



☑ **Cosmetic Formulation**

☑ **Topical Application**

☑ **Oral Care Applications**

☑ **Thickening Agent**

☑ **Suspending Agent**

☑ **Emulsifying Agent**



Leepol® range is a synthetic high molecular weight cross-linked water-soluble polymer of acrylic acid, which is known as "Carbomer". It is widely used in cosmetic, pharmaceutical and household industries. It is available in powder and liquid form, which is soluble in water, alcohols and glycols. Before neutralization, pH of Leepol™ grade solution lies between 2.5 and 3.0

General Application

Thickening	- To produce wide range of viscosities and flow properties
Suspending	- To suspend insoluble matters like cosmetic beads and mica pearls
Emulsifying	- To provide emulsification of high content of oils and waxes
Stabilizing	- To provide stability to the emulsion based products

Grades

Traditional	Leepol® 940, Leepol® 934, Leepol® 941, Leepol® 956, Leepol® 996
Benzene free	Leepol® 980, Leepol® 974, Leepol® 971, Leepol® 990, Leepol® ET-1, Leepol® TR-1, Leepol® TR-2
Pharmaceutical for oral use Sustained release	Leepol® 934P, Leepol® 974P, Leepol® 971P
High surfactant system	Leepol® 971P, Leepol® 934P
Polymeric emulsifier	Leepol® ET-1, Leepol® TR-1, Leepol® TR-2, Leepol® U-10, Leepol® U-20, Leepol® U-21

Viscosity

Product	(%) Solution (at pH 7.3-7.8)	Minimum Viscosity* (cps)	Maximum Viscosity* (cps)	Spindle no.
Leepol® 940/980	0.5	40,000	60,000	7
Leepol® 934/974	0.5	30,500	39,000	6
Leepol® 934P/974P	0.5	29,400	39,400	6
Leepol® 941/971	0.5	4,000	11,000	5

*viscosity of neutralized solutions is to be measured at 25°C and 20 rpm.

Leepol® 940 | 980 (USP/NF Compendial Name :- Carbomer Homopolymer Type C)

It is very efficient rheology modifier, which provides high viscosity and forms sparkling clear water or hydro alcoholic gels. It is a 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 cosmetic and pharmaceutical industries. It conforms to USP/NF specification. Leepol 980 is benzene-free grade of Leepol® 940.

Applications

Hair styling gels | Hydro-alcoholic gels | Moisturizing gels | Diclofenac diethylamine gels | Bath gels | Tooth pastes | Shampoos | Aloe vera gels | Shaving gels | Sunscreen lotions | Azithromycin gels

Leepol® 934 | 974 (USP/NF Compendial Name :- Carbomer Homopolymer Type C)

It offers excellent stability at medium and high viscosity. It produces thick formulations for opaque gels, emulsions, creams and suspensions. It is extensively used in the pharmaceutical topical formulations (ointment) and cosmetic creams. It conforms to USP/NF specification. Leepol® 974 is benzene-free grade of Leepol® 934.

Applications

Creams | Hand, face and body lotions | Moisturizing gels

Leepol® 934P | 974P (USP/NF Compendial Name :- Carbomer Homopolymer Type B)

It is a high purity grade, which confirms to USP/NF specification. It is specially used in oral care formulations of pharmaceutical industries. It is used as a thickening, suspending and emulsifying agent. It can be used in liquid or semisolid oral dosage forms. It is used in sustained release formulation as a binding agent in pharmaceutical formulation. Leepol® 974P is benzene-free grade of Leepol® 934P.

Applications

Sustained release formulations | Ophthalmic gel and eye lotions | Tooth paste | Taste-masking | Skin drug | delivery | Suspensions and emulsions

Leepol® 941 | 971 (USP/NF Compendial Name :- Carbomer 941)

It gives permanent emulsions and suspensions at low viscosity, even with ionic systems. It is more efficient at low concentration compared to other grades with excellent clarity. It is used in cosmetic formulations as a emulsifier & stabilizer. It confirms to USP/NF specification. Leepol® 971 is benzene-free grade of Leepol® 941.

Applications

Lotions | Hydro-alcoholic gels | Clear gels

Leepol® 971P (USP/NF Compendial Name :- Carbomer Homopolymer Type A)

It is a high purity grade, which is specially used in oral care formulations of pharmaceutical industries. It confirms to USP/NF specification.

Applications

Sustained release formulations | Oral solid dosage forms

Leepol® 956 (USP/NF Compendial Name :- Carbomer Homopolymer Type C)

It is a carbomer with medium viscosity and long flow properties. It is mainly used for thickening of high clarity hydro-alcoholic preparation.

Applications

Hand sanitizers | High clarity gels

Leepol® 996 (USP/NF Compendial Name :- Carbomer Homopolymer Type C)

It provides the higher viscosity with good clarity compared to Leepol 940 or Leepol 980 in aqueous and hydroalcoholic based system. It has extremely low short flow properties.

Applications

Creams | Hydroalcoholic gels | Exfoliating scrubs

Leepol® TR - 1 (USP/NF Compendial Name :- Carbomer Co-polymer Type B)

It is a polymeric emulsifier of cross linked copolymers of acrylic acid. It is used as stabilizers of oil in water systems, with up to 20% oil loading possible at typical use levels of 0.2 to 0.4%. It is HLB independent and cold processable emulsifier.

Applications

Face creams | Moisturizing body lotions | Sunscreen creams

Leepol® TR - 2 (USP/NF Compendial Name :- Carbomer Co-polymer Type A)

It is a polymeric emulsifier of cross linked copolymers of acrylic acid. It is used as stabilizers of oil in water systems, with up to 50% oil loading possible at typical use levels of 0.2 to 0.4%. It is HLB independent and cold processable emulsifier. Other Leepol® grades should be used with Leepol® TR-2, where higher viscosity emulsions are required.

Applications

Skin lightening serums | Hand, face and body lotions | Sunscreen lotions

Leepol® ET - 1

It is a liquid acrylic rheology modifier, designed to suspend, stabilize, thicken and enhance the appearance of surfactant based cosmetic, pharmaceutical and household formulations. It has high yield value for suspending cosmetic beads and mica pearl powders. It is very useful where surfactant level is high. It is a cost effective and easy to use polymer.

Applications

Shampoos | Gel cleansers | Shower gels | Facial scrubs | Foaming facial cleansers

Advantages

- Thickening efficiency - High viscosity at low concentration
- Uniform performance - Leepol gives uniform viscosity performance, while natural gums vary in their performance
- Temperature stability - There is no significant effect of temperature on polymer
- Unaffected by aging - Excellent shelf life
- 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

Neutralizers

Leepol® polymers are dry, highly coiled acidic molecules. After dispersion in water, they begin to hydrate and partially uncoil. Maximum thickening can be achieved by converting the acidic Leepol® polymer to a salt. It is easily achieved by neutralizing the Leepol® range with a common base such as Sodium hydroxide (NaOH), Potassium hydroxide (KOH), Tri-ethanolamine (TEA), Ammonia (28%), Diisopropanolamine, Aminomethyl Propanol (AMP), Triisopropanolamine (TIPA), 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 % w/w.

Toxicity

Leepol® range is a high molecular weight polymer. It cannot be absorbed by body, thus it is totally safe for human consumption. Test for toxicological tolerance shows that it does not have any pronounced, physiological action and is non-toxic.

Dermal irritation (in vitro test) - non-irritant

Eye irritation (in vitro test) - non-irritant

Skin sensitization (max. test) - non-sensitizing

Storage & Handling

Leepol® range is highly hygroscopic in supplied form, it contains maximum of 2.0% moisture. When exposed to open air at room temperature and 50% relative humidity, its equilibrium moisture uptake is 8.0%. All moisture uptake does not affect its efficiency but polymer with high level of moisture is more difficult to disperse and weigh accurately. So, Leepol® polymers must be stored in a tightly closed container and away from direct contact with water and excessive humid conditions.

Leepol® polymers efficiency will not affect up to two hours at temperatures below 104°C. When it is exposed to excessive temperatures, it can be plasticized and lose its characteristics.

Shelf life

Powder form : Five years from date of manufacturing in intact condition

Liquid form : Two years from date of manufacturing in intact condition

Note : Based on our testing, dry Leepol® polymers should last for years if stored properly and protected from moisture and extreme temperature

Packing

Powder form : 20 kg net in round fibre paper board drums with polyethylene liner

Liquid form : 20 kg, 60 kg plastic carboys and 200 kg plastic drums

Leepol[®] Coat

METHACRYLIC ACID
COPOLYMER

- ☐ Enteric Coating
- ☐ Film Coating
- ☐ Sustained Release
- ☐ Taste Masking
- ☐ Moisture Barrier Coating
- ☐ Transdermal Patch
- ☐ Encapsulation
- ☐ Tablet Binder

Leepol[®] is an advancement of
Coating Material Science & Polymer Chemistry.

Applications

- ☐ Enteric coating is used for resistance to gastric fluid.
- ☐ Film coating is used for resistance to environmental effect like humidity, temperature, light etc.
- ☐ Provides product identity.
- ☐ Imparts cosmetic elegance to product appearance.
- ☐ Reduces the risk of incompatibility.
- ☐ Improves mechanical strength of product.
- ☐ Suitable for matrix structure.

Benefit

- ☐ Options of solvent, hydroalcoholic and aqueous vehicle.
- ☐ Less quantity required so reducing volume of coating solution thus shorting production time.
- ☐ Stability over a broad temperature range.
- ☐ Exhibits excellent colour value.
- ☐ Cost effective.
- ☐ Easy to formulate.

Toxicity

- ☐ Leepol[®] Coat is a high molecular weight polymer and can not be absorbed by body. Thus, it is safe for human consumption.
- ☐ Test for toxicological tolerance shows that it does not have any pronounced or physiological action.

Shelf Life

- ☐ Powder form: Five years from date of manufacturing in intact condition.
- ☐ Liquid form: Two year from date of manufacturing in intact condition.

Packing

- ☐ Powder form: 5kg and 20kg net in fiber paper board round drums with polyethylene liner.
- ☐ Liquid form: 20kg and 60kg plastic carboys and 200kg plastic drums

Storage

- ☐ Powder: Store at dry place and below 50°C.
- ☐ Liquid: Store at dry place and between 5°C to 40°C. Do not freeze.

Leepol® Coat family of polymers is either transparent or colored film forming coating polymers based on methacrylic acid copolymers type A, B & C which conforms to USP/NF, EP & JP specifications. Acrycoat polymers are used in film coating, enteric coating, moisture barrier coating, sustained release coating and matrix forming, taste masking of bitter drugs, binder for powders, transdermal therapeutic system etc.

Application	Grade*	Availability	Solvents	Use Level** (calculation on dry basis)	Solubility	Pharmacopoeial Monographs	Advantages
• Enteric Coating (Drug delivery in Jejunum)	Leepol® L100	Powder	Alcohols Acetone	4.0-5.0%	Soluble in intestinal fluid from pH 6.0 and above, Insoluble in gastric fluid	• USP/NF: Methacrylic Acid Copolymer, Type A - NF	Organic / solvent coating system, Less quantity requirement
• Enteric Coating (Drug delivery in Duodenum)	Leepol® L100D	Powder	Water, Water+Alcohol Alcohols	4.0-5.0%	Soluble in intestinal fluid from pH 5.5 and above, Insoluble in gastric fluid	• USP/NF: Methacrylic Acid Copolymer, Type C - NF • Ph.Eur.: Methacrylic Acid - Ethyl Acrylate Copolymer (1:1) Type A	Aqueous & semi aqueous coating system, Less quantity requirement
	Leepol® L30D	30% Milky aqueous dispersion				• USP/NF: Methacrylic Acid Copolymer Dispersion-NF • Ph.Eur.: Methacrylic Acid - Ethyl Acrylate Copolymer (1:1) Dispersion 30 Percent	Aqueous coating system, Less quantity requirement
• Sustained Release • Enteric Coating (Drug delivery in Colon)	Leepol® S100D	Powder	Alcohols Acetone	10.0 - 20.0%	Soluble in intestinal fluid from pH 7.0 and above, Insoluble in gastric fluid	• USP/NF: Methacrylic Acid Copolymer, Type B - NF • Ph Eur.: Methacrylic Add - Methyl Methacrylate Copolymer (1:2)	pH dependent polymer, Mixing possibility with Leepol® L100
	Leepol® S12.5	12.5% Clear solution in isopropanol					

* Plasticizer needed (where the films are brittle, to improve film elasticity) Recommended Plasticizers Triethyl Citrate, Castor Oil, Propylene glycol, Polyethylene glycol, Dibutyl phtalate, Triacetin, Dibutyl sebacate etc. ** Depends upon facilities available at customer premises like type of product, batch size, equipments etc.

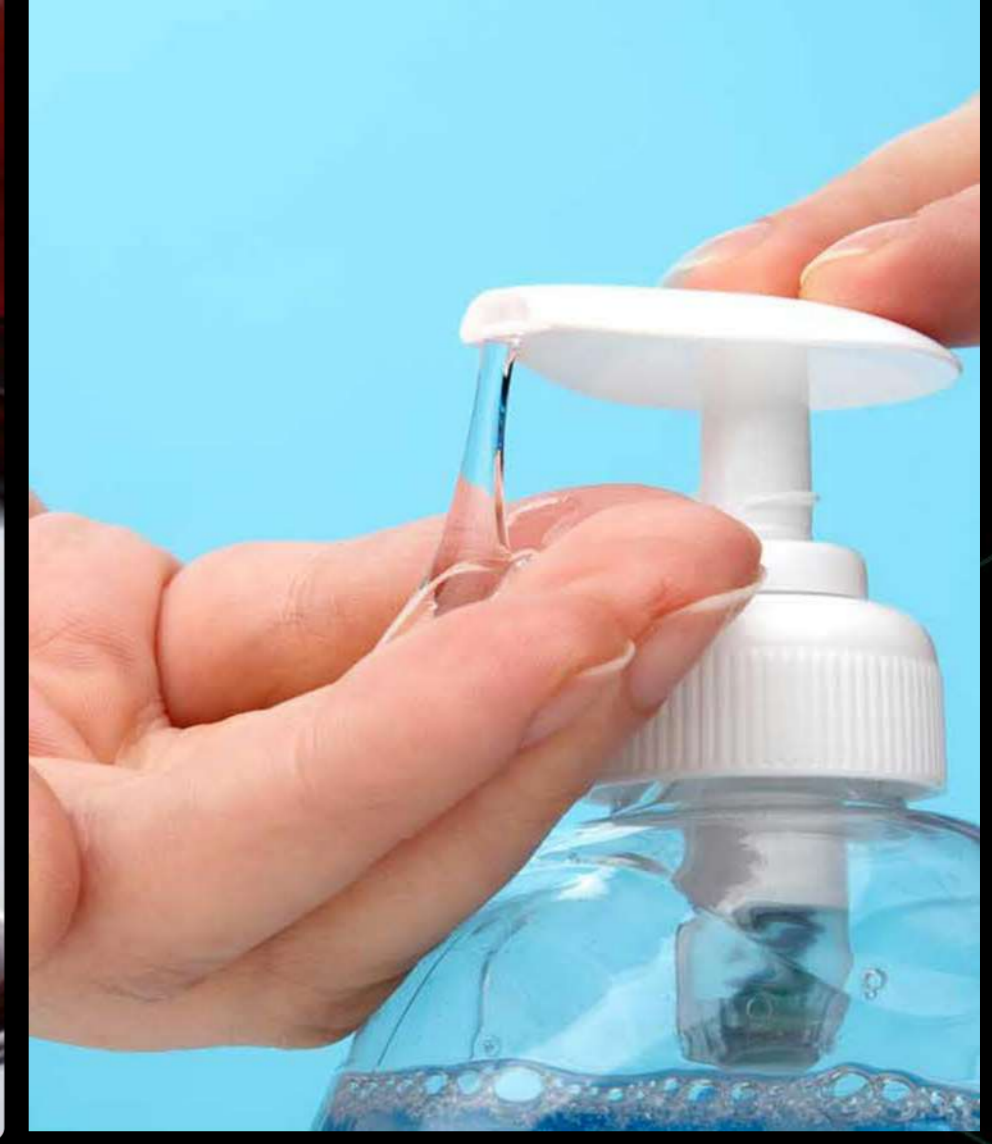
Jejunum pH 6-7
Leepol® Coat L-100

Enteric Formulations Duodenum pH > 5.5
Leepol® Coat L-100D
Leepol® Coat L-30D
Leepol® Coat L-30DA

Ileum, Colon delivery pH > 7.0
Leepol® Coat S-100
Leepol® Coat S-12.5

Leepol[®] HCO

Castor Oil
Derivatives



Hair Care | Skin Care
Face Care | Sun Care

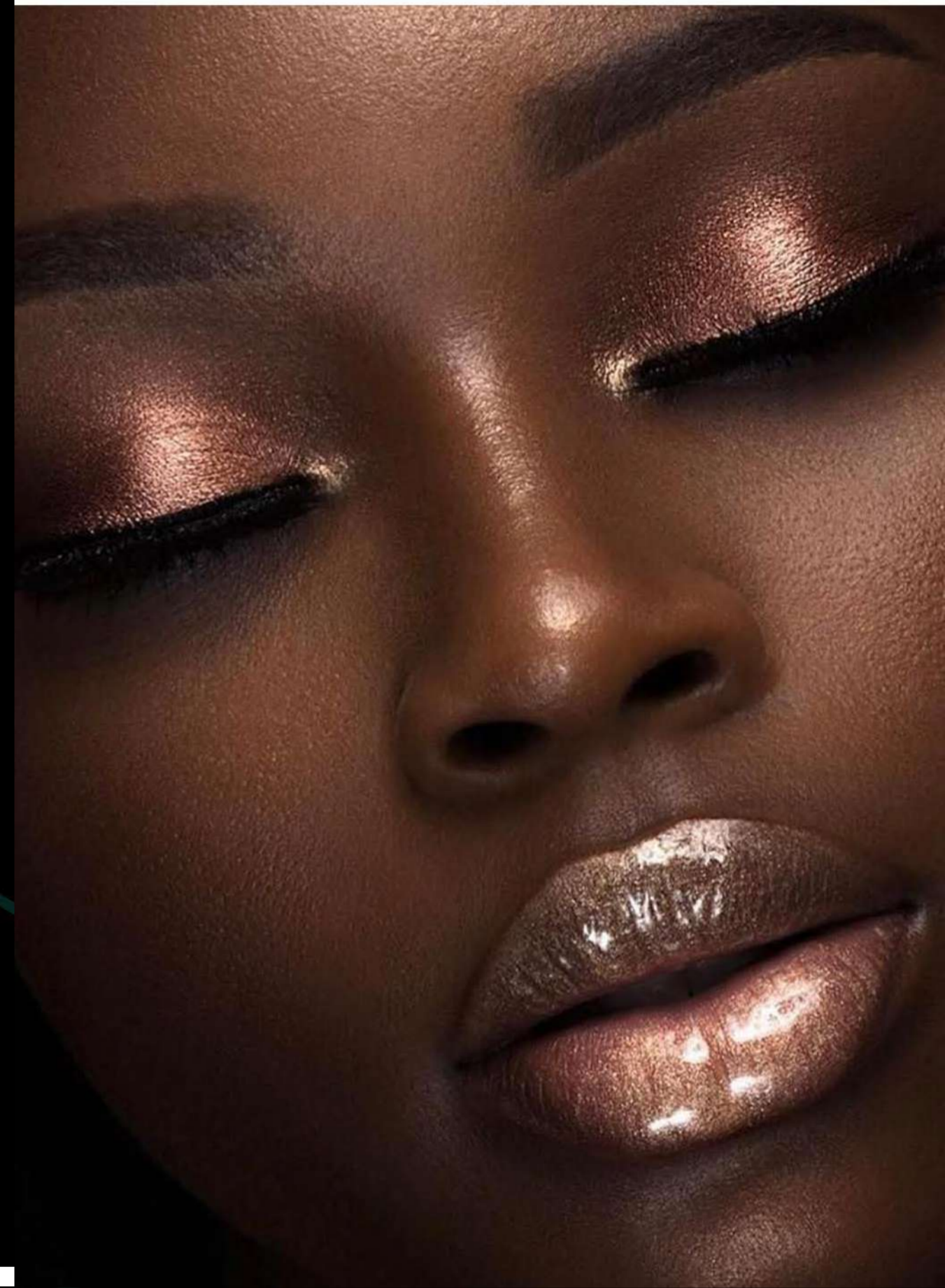
Vitamin Solubilizer
Oil & Perfume Solubilizer
API Solubilizer
Dissolution Improver
Cream Emulsifier

HCO K - 140

HCO K - 150

HCO K - 160

Leepol[®] is an advancement of
Coating Material Science
& Polymer Chemistry.



Leepol® HCO grades are chemically castor oil derivatives. They are non ionic solubilizer obtained by reacting hydrogenated castor oil with ethylene oxide. They are suitable for multiple applications providing solubilizing and emulsifying capacity to many of cosmetics and personal care products. They are effective solubilizer for perfumes, essential oils and other oils soluble cosmetic actives. They act as wonderful emulsifier for oil in water and water in oil emulsion system.

Mechanism

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

Benefits

- ☒ Required lesser ratio compare to other solubilizers
- ☒ Transparency improver
- ☒ Cost effective
- ☒ Volatility retardant
- ☒ Better stability at storage and elevated temperature
- ☒ GRAS status

Applications

- | | | |
|-------------------|-----------------------|----------------------------|
| ☒ Face wash | ☒ Shampoo | ☒ Body spray |
| ☒ Body mist | ☒ After shave cologne | ☒ Serum |
| ☒ Shower gel | ☒ Liquid soaps | ☒ Skin care creams/lotions |
| ☒ Sun care | ☒ Baby care products | ☒ Hair care products |
| ☒ Air freshner | ☒ Detergent cleansers | ☒ Wetting agent for waxes |
| ☒ Hand sanitizers | ☒ Aerosol formulation | ☒ Decorative cosmetics |

Functions

Solubilizer

Leepol® HCO range improves water solubility of major water insoluble products. It is compatible with most of all ingredients. It helps to solubilize different Vitamins like vitamin A palmitate, vitamin D, vitamin E, acetate etc. It is also used as solubilizer and stabilizer for oils and perfumes in cosmetic industries.

Emulsifier

Leepol® HCO 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 emulsifying ability and suitable for emulsification of mineral oil, natural oil, stearyl etc.

Moisturizer

Leepol® HCO range improves moisturizing effect and soft feeling of topical formulations.

Transparency Improver

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

Volatility Retardant

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

Film Former

Leepol® HCO range improves film forming capacity and flow properties in cream, lotion, lipstick etc.

Adhesion Reducer

Leepol® HCO reduces adhesion and chipping properties of oils. It gives smooth feeling in all cosmetic (Creams and lotions, hair oils etc.) formulations.

Aerosol Formulations

Leepol® HCO improves solubility of the propellant in aqueous phase of aerosol.

Characteristics of Leepol® HCO grades

Characteristics	Leepol® HCO K-140	Leepol® HCO K-150	Leepol® HCO K-160
Chemical Name	<ul style="list-style-type: none">• PEG-40 Hydrogenated Castor Oil (USP/NF)• Macrogol-Glycerol hydroxystearate (Ph.Eur.)	PG, PEG-40 Hydrogenated Castor Oil (In House)	PEG-60 Hydrogenated Castor Oil (In House)
Description	White to pale yellow Viscous liquid or soft thin paste	White to pale yellow Viscous liquid	White to off white Paste
Odor	Odorless	Odorless	Odorless
Taste	Tasteless	Tasteless	Tasteless
Miscibility	At elevated temperatures, it forms clear mixtures with fatty acids and fatty alcohols.		
Effect of temperature	Leepol® HCO grades are stable and does not turn rancid unless subjected to excessive heat.		
Saponification value	45-69	45-55	35-45
Hydroxyl value	60-80	65-75	50-70
Congealing temperature	16-26°C	5-15°C	-
pH value of 10% aqueous solution	6.0-7.0	6.0-7.0	6.0-8.0
Water content (K. Fischer)	NMT 3.0%	NMT 3.0%	NMT 2.0%
HLB value	14-16	14-17	15-17

Usage

Leepol® HCO usage level depends upon the nature of perfume or essential oil in cosmetic products. Generally, upto 1:3 perfume to solubilizer ratio is used to solubilize the perfume or essential oil effectively. If the perfume or active ingredient is highly water insoluble then Leepol® HCO usage level should be increased to make a clear solution. The usage level of Leepol® HCO grades is generally 2 to 5% as an emulsifier for the preparation of cosmetic formulations.

To give general idea about the solubilization properties of Leepol® HCO grades, the following table lists the quantities of solubilizer required to obtain clear solutions with 1 gm of the ethereal oils and fragrances listed and 0.2 g of the hydrophobic active substances listed.

Leepol® HCO 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 hydrophobic and hydrophilic part. They are almost tasteless and odorless. They are used as solubilizer for fat-soluble vitamins, perfumes, essential oils and other hydrophobic pharmaceuticals. They have ability to solubilize or emulsify oil soluble ingredients and convert them into clear transparent solution or stable emulsion respectively. It improves the solubility of poorly soluble drugs (BCS class II and class IV).

Mechanism of Leepol® HCO:

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

Typical specification

Name	Leepol® HCO K-140	Leepol® HCO K-150	Leepol® HCO K-160
Saponification value	45-69	45-55	35-45
Hydroxyl value	60-80	65-75	50 70
Congealing temperature	16-26°C	5-15°C	
pH value of 10% aqueous solution	6.0-7.0	6.0-7.0	6.0-8.0
Water content (K. Fischer)	NMT 3.0%	NMT 3.0%	NMT 2.0%
HLB value	14-16	14-17	15-17

Characteristics of Leepol® HCO grades:

Characteristics	Leepol® HCO K-140	Leepol® HCO K-150	Leepol® HCO K-160
Chemical Name	<ul style="list-style-type: none"> • PEG-40 Hydrogenated Castor Oil (USP/NF) • Macrogol-Glycerol hydroxystearat (Ph.Eur.) 	PG, PEG-40 Hydrogenated Castor Oil (In House)	PEG-60 Hydrogenated Castor Oil (In House)
Description	White to pale yellow Viscous liquid or soft thin paste	White to pale yellow Viscous liquid	White to off white Paste
Odor	Odorless	Odorless	Odorless
Taste	Tasteless	Tasteless	Tasteless
Miscibility	At elevated temperatures, it forms clear mixtures with fatty acids and fatty alcohols.		
Effect of temperature	Leepol® HCO grades are stable and does not turn rancid unless subjected to excessive heat.		
Solubility	It forms clear solutions, in water, ethanol, 2-propanol, n-propanol, ethyl acetate, chloroform, tetrachloride, toluene.	It forms clear solutions, in water, ethanol, 2-propanol, n-propanol, ethyl acetate, chloroform, carbon tetrachloride, toluene.	It forms clear solutions in water, ethanol, 2-propanol, n-propanol.

Characteristics of Leepol[®] HCO grades

The solubilizing capacity of the various active ingredients with Leepol[™] HCO grades is given in different ratio as follow.

Active ingredient (1 gm)	Leepol [®] HCO K-140 (gm)	Leepol [®] HCO K-150 (gm)	Leepol [®] HCO K-160 (gm)
Acetaminophen		5	
Vitamin A Palmitate	5		
Vitamin D	5		
Vitamin E Acetate	5		
Bromhexine Hydrochloride		30	
Ambroxol Hydrochloride		15	
Cyproheptadine Hydrochloride		60	
Dextromethorphan Hydrobromide		5	
Povidone Iodine	0.3		
Cod Liver Oil	10		10
Chlorhexidine Gluconate (20%)	10	10	
Acebrophylline		30	
Menthol		4	

Note: Above table shows best suitable option of Leepol[®] HCO grades for different active ingredients. All Leepol[®] HCO grades are capable of solubilizing above active ingredients in different ratio. Please contact us for formulation details of other active ingredients. Leepol[®] HCO grades shows little tendency to foaming which can be suppressed by adding a small amount of defoamer.

Applications:

Solubilizer

Leepol[®] HCO 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).

Emulsifier

Leepol[®] HCO 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, stearyl etc. It can obtain a steady system when used alone.

Moisturizer

Leepol[®] HCO range improves moisturizing effect and soft feeling.

Transparency Improver

Leepol[®] HCO 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

Leepol[®] HCO 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.

Volatility Retardant

Leepol® HCO 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

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

Masking Agent

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

Adhesion Reducer

Leepol® HCO reduces adhesion and chipping properties of oils. It gives smooth feeling on application like in all pharmaceuticals and cosmetic (Creams and lotions, hair oils etc.) formulations.

Aerosol Formulations

Leepol® HCO improves solubility of the propellant in aerosol in aqueous phase.

Toxicity

Acute and chronic toxicity test in animals have shown that Leepol™ HCO grades are essentially non-toxic and non-irritant material.

Storage & Handling

Leepol® HCO grades must be stored in a tightly closed container. If the containers are repeatedly opened, microorganisms may grow in the product, particularly the equipment used is not sterile. For proper handling and sampling homogenization of the container content is necessary. It is recommended to use electrical drum heaters, heating covers or a heating chamber.

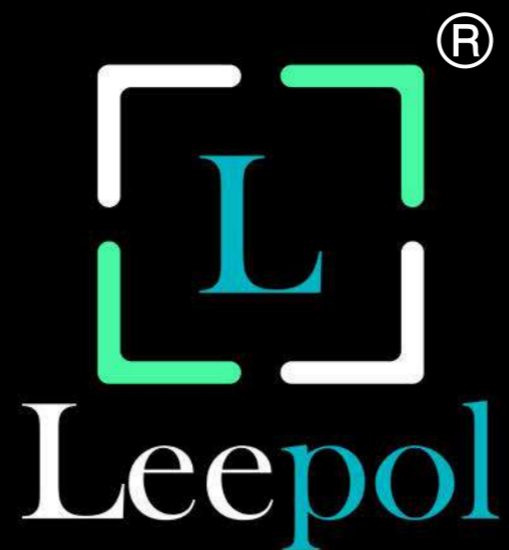
Retest date

At least two years from date of manufacturing in intact condition.

Packing

20kg & 50kg net in plastic carboy & 200kg plastic drums.

PRODUCT OF INDIA



By The Leela Corporation

Leepol[®] Carbomer | Leepol[®] Coat | Leepol[®] HCO



ISO 9001 : 2015 (QMS) Certified Company



ISO 14001 : 2015 (EMS) Certified Company

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