



Passion for Polymers



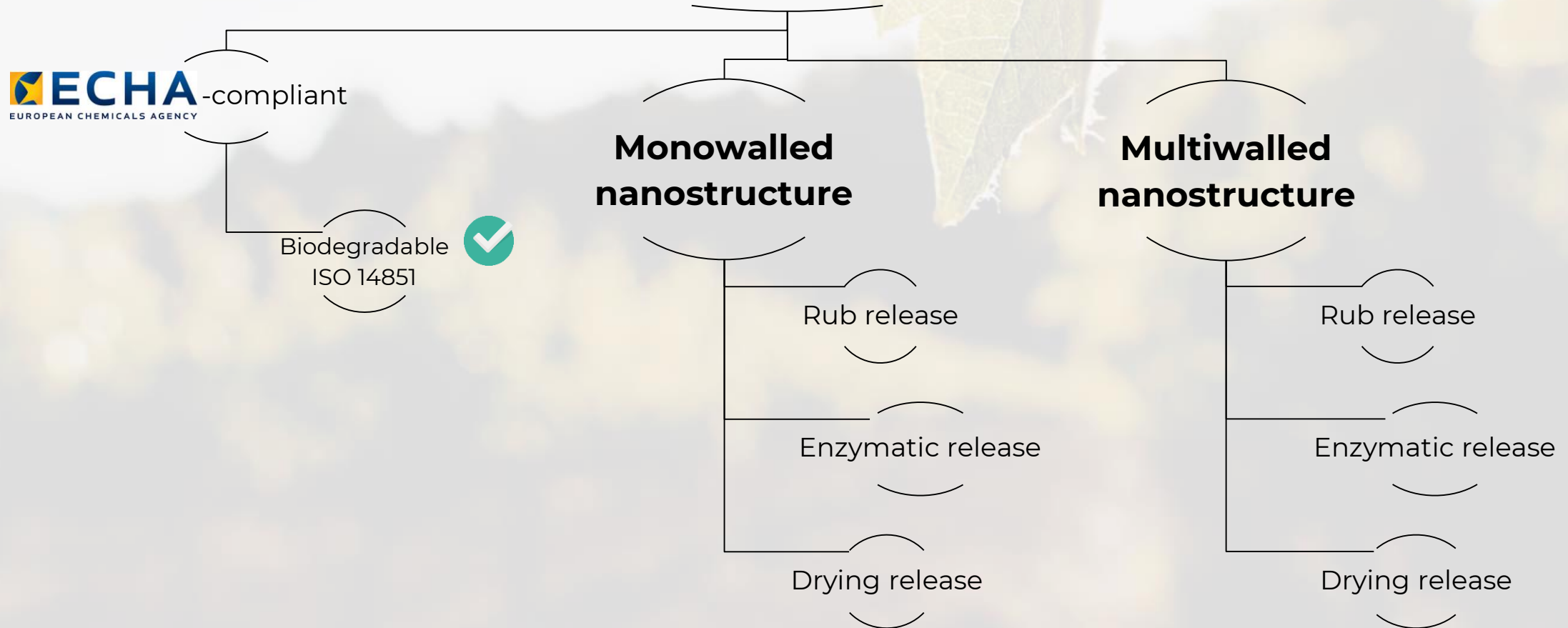


ENCAPSULATION

TECHNOLOGY



Polyurethane-polyurea Nano & Microcapsules



REGULATORY



USA – EU – China – Australia – Canada - **COMPLIANT**

Free of: Formaldehydes, BHT*, BHA, parabens, sulphates, amines, acrylates, phthalates, artificial colorants, SVHC, gluten, BSE, triclosan, aluminum, VOC, 1,4-dioxane, nitrosamines, pesticides, propylene glycol, diethylene glycol, among other common allergens

Vegan & Earth-friendly

Not animal tested

No organic solvents used during manufacturing

ECOPOL TECH



CAPSURETINOL UHC (431600 IU/g)

13% retinol content polyurea microcapsules with high stability to oxidation and proprietary controlled release platform (BHT-free!)

CAPSURETINOL PF (99600 IU/g)

3% retinol content polyurea microcapsules with high stability to oxidation and proprietary controlled release platform

CAPSURETINOL RP (750000 IU/g)

30% retinyl propionate content polyurea microcapsules with high stability to oxidation and proprietary controlled release platform

ECOCAPS-TOCOPHEROL

Polyurea microcapsules with 25% content of vitamin E (D,L-alpha-tocopherol)

ECOCAPS-LAVENDER

Polyurea microcapsules with 30% content of lavender essential oil

ECOCAPS-GRAPEFRUIT

Polyurea microcapsules with 30% content of grapefruit essential oil

ECOCAPS-CINNAMON

Polyurea microcapsules with 15% content of cinnamon essential oil

ECOCAPS-NEEM-EX

Polyurea microcapsules with 30% content of neem leaves extract

ECOCAPS-NEEM

Polyurea microcapsules with 3% content of neem seed essential oil

ECOCAPS-NEEM-SPEARMINT

Polyurea microcapsules with 3% and 6% content of co-encapsulated neem and spearmint essential oils

ECOPOL TECH



ECOCAPS-ARGAN

Polyurea microcapsules with 30% content of argan oil

ECOCAPS-MENTHOL

Polyurea microcapsules with 6% content of menthol

ECOCAPS-GINSENG

Polyurea microcapsules with 30% content of ginseng extract

ECOCAPS-GINSENG-WELLNESS

Polyurea microcapsules 30% high content of ginseng extract + aromatherapy oil

ECOCAPS-BERGAMOT

Polyurea microcapsules with 12% content of bergamot essential oil

ECOCAPS-TEA TREE

Polyurea microcapsules with 30% content of tea tree essential oil

ECOCAPS-FRAGRANCE

Polyurea microcapsules with high content of the client choice hydrophobic fragrance

ECOSTRATAR

Multifunctional nanoparticles for controlled delivery of cosmetic actives*

ECOSTRATAR-TARGET

Multifunctional nanoparticles for controlled cell-targeted delivery of cosmetic actives*

ECORES

3% resveratrol-loaded polyurethane-polyurea nano/microcapsules*

SILAIRCARE-18

18% amodimethicone-loaded polyurethane-polyurea nano/microcapsules

* Custom-developed once ordered

ECOPOL TECH



CAPSURETINOL UHC. *BHA/BHT-free!*

Chemistry: Polyurea microcapsules of ultra high retinol content (13% = 431600 IU/g). Served as aqueous dispersion.

APP: Anti-wrinkle, skin regeneration, anti-acne, intensive treatments. Hermetically encapsulated to avoid retinol degradation and unwanted interactions with external surfactants. Large microcapsules break and release retinol immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Retinol (and) Caprylic/Capric Triglyceride (and) Polyurethane Crosspolymer-1 (and) Polyvinyl Alcohol (and) Tocopherol

ECOPOL TECH



CAPSURETINOL PF

Chemistry: Polyurea microcapsules of high retinol content (3% = 99600 IU/g). Served as aqueous dispersion or powder.

APP: Anti-wrinkle, skin regeneration. Hermetically encapsulated to avoid retinol degradation and unwanted interactions with external surfactants. Large microcapsules break and release retinol immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Glycine Soja (Soybean) Oil (and) Polyurethane Crosspolymer-1 (and) Retinol

ECOPOL TECH



CAPSURETINOL RP

Chemistry: Polyurea microcapsules of ultra high retinyl propionate content (30% = 750000 IU/g). Served as aqueous dispersion.

APP: Anti-wrinkle, skin regeneration, anti-acne. Hermetically encapsulated to avoid retinyl propionate degradation and unwanted interactions with external surfactants. Large microcapsules break and release retinyl propionate immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Retinyl Propionate (and) Polyvinyl Alcohol (and) Polyurethane Crosspolymer-1 *

ECOPOL TECH



ECOCAPS-TOCOPHEROL

Chemistry: Polyurea microcapsules containing D,L-alpha-tocopherol vitamin E form (25%). Served as aqueous dispersion.

APP: Antioxidant. Hermetically encapsulated to avoid early oxidation of vitamin E. Large microcapsules break and release vitamin E immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Tocopherol (and) Polyvinyl Alcohol (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-LAVENDER

Chemistry: Polyurea microcapsules containing lavender essential oil (30%). Served as aqueous dispersion.

APP: Antimicrobial, aromatherapy. Hermetically encapsulated to avoid top notes evaporation and unwanted interactions with external surfactants. Large microcapsules break and release lavender immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Lavandula Hybrida Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-GRAPEFRUIT

Chemistry: Polyurea microcapsules containing grapefruit essential oil (30%). Served as aqueous dispersion.

APP: Antimicrobial, aromatherapy. Hermetically encapsulated to avoid top notes evaporation and unwanted interactions with external surfactants. Large microcapsules break and release grapefruit immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Citrus Grandis Peel Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-CINNAMON

Chemistry: Polyurea microcapsules containing cinnamon essential oil (15%). Served as aqueous dispersion.

APP: Antimicrobial, antioxidant, aromatherapy. Hermetically encapsulated to avoid top notes evaporation and unwanted interactions with external surfactants. Large microcapsules break and release cinnamon immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Cinnamomum Cassia Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-NEEM-EX

Chemistry: Polyurea microcapsules containing neem leaves extract (30% rich in azadirachtin). Served as aqueous dispersion.

APP: Antimicrobial, anticaries, pesticidal. Hermetically encapsulated to avoid neem odor and unwanted interactions with external surfactants. Large microcapsules break and release neem immediately. Small ones accumulate in cavities for a prolonged release.

INCI: Aqua (and) Helianthus Annuus (Sunflower) Seed Oil (and) Melia Azadirachta Leaf Extract (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-NEEM

Chemistry: Polyurea microcapsules containing neem seed oil (3%). Served as aqueous dispersion.

APP: Antimicrobial, anticaries, insect repellent, pesticidal. Hermetically encapsulated to avoid neem odor and unwanted interactions with external surfactants. Large microcapsules break and release neem immediately. Small ones accumulate in cavities for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Melia Azadirachta Seed Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-NEEM-SPEARMINT

Chemistry: Polyurea microcapsules containing neem seed oil (3%) and spearmint oil (6%). Served as aqueous dispersion.

APP: Antimicrobial, anticaries, antiinflammatory. Hermetically encapsulated spearmint to avoid neem odor and provide a fresh aroma and unwanted interactions with external surfactants. Large microcapsules break and release neem immediately. Small ones accumulate in cavities for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Melia Azadirachta Seed Oil (and) Mentha Viridis (Spearmint) Leave Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-MENTHOL

Chemistry: Polyurea microcapsules containing menthol (6%). Served as aqueous dispersion.

APP: Cooling-effect, anti-inflammatory. Hermetically encapsulated to avoid menthol odor and unwanted interactions with external surfactants. Large microcapsules break and release menthol immediately. Small ones accumulate in cavities for a prolonged release.

INCI: Aqua (and) Menthol (and) Caprylic/Capric Triglyceride (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-ARGAN

Chemistry: Polyurea microcapsules containing argan essential oil (30%). Served as aqueous dispersion.

APP: Skin/hair repair. Hermetically encapsulated to avoid argan degradation and unwanted interactions with external surfactants. Large microcapsules break and release argan immediately. Small ones accumulate in cavities for a prolonged release.

INCI: Aqua (and) Argania Spinosa Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-GINSENG

Chemistry: Polyurea microcapsules containing ginseng extract (30%). Served as aqueous dispersion.

APP: Anti-oxidant, anti-aging, anti-inflammatory. Hermetically encapsulated to avoid ginseng degradation and unwanted interactions with external surfactants. Large microcapsules break and release ginseng immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Ginseng Panax Extract (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-GINSENG-WELLNESS

Chemistry: Polyurea microcapsules containing ginseng extract (30%) + choice of aromatherapy oil. Served as aqueous dispersion.

APP: Anti-oxidant, anti-aging, anti-inflammatory, aromatherapy. Hermetically encapsulated to avoid ginseng degradation and unwanted interactions with external surfactants. Large microcapsules break and release ginseng immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Ginseng Panax Extract + choice of aromatherapy oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-BERGAMOT

Chemistry: Polyurea microcapsules containing bergamot essential oil (12%). Served as aqueous dispersion.

APP: Antimicrobial, cleansing, aromatherapy. Hermetically encapsulated to avoid bergamot degradation and unwanted interactions with external surfactants. Large microcapsules break and release bergamot immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Citrus aurantium Bergamia (Bergamot) Fruit Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-TEA TREE

Chemistry: Polyurea microcapsules containing tea tree oil (30%). Served as aqueous dispersion.

APP: Anti-lice, anti-microbial, anti-inflammatory. Hermetically encapsulated to avoid tea tree oil degradation and unwanted interactions with external surfactants. Large microcapsules break and release tea tree oil immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Caprylic/Capric Triglyceride (and) Melaleuca Alternifolia (Tea Tree) Leaf Oil (and) Polyurethane Crosspolymer-1

ECOPOL TECH



ECOCAPS-FRAGRANCE

Chemistry: Polyurea microcapsules containing a hydrophobic fragrance (20-40%). Served as aqueous dispersion.

APP: Perfume burst release onto skin/hair. Hermetically encapsulated to avoid unwanted interactions with external surfactants and fragrance early release. Large microcapsules break and release fragrance immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Polyurethane Crosspolymer-1 (and) choice of fragrance

ECOPOL TECH



ECOSTRATAR

Chemistry: Customizable self-stratified polyurethane-polyurea capsules. Choose actives, capsule size, release mechanism. Served as a nanoemulsion or powder.

APP: Multiple active delivery applications. Solubilizes and protects cosmetic actives. Capsules slowly release their content upon Shell biodegradation.

ID: US/EU patented technology WO2014114838A3

ECOPOL TECH



ECOSTRATAR-TARGET

Chemistry: Customizable self-stratified polyurethane-polyurea capsules. Choose actives, capsule size, release mechanism, and targeting molecules. Served as a nanoemulsion or powder.

APP: Multiple cell-targeted delivery applications. Solubilizes and protects cosmetic actives. Nanocapsules release their content upon target-cell internalization.

ID: US/EU patented technology WO2014114838A3

ECOPOL TECH



ECORES

Chemistry: Polyurethane-polyurea nano-microcapsules containing (E)-Resveratrol (3%). Served as aqueous dispersion

APP: Anti-wrinkle, anti-inflammatory, antioxidant. Solubilizes and protects Resveratrol from oxidation. Large microcapsules break and release resveratrol immediately. Small ones accumulate in wrinkles for a prolonged release.

INCI: Aqua (and) Polyurethane Crosspolymer-1 (and) Caprylic/Capric Triglyceride (and) Resveratrol

ECOPOL TECH



SILAIRCARE-18

Chemistry: Polyurea-polyurethane nanocapsules containing 18% encapsulated amodimeticone at neutral pH.

APP: Hair and skin conditioner to be included in leave-in formulas such as hair-masks, conditioners, serums, lotions, and creams. Amodimethicone is released immediately after blow-drying and flat-ironing. Compatible even with slightly acidic formulations.

INCI: Aqua (and) Polyurethane Crosspolymer-1 (and) Amodimethicone



FILM-FORMING POLYMERS

TECHNOLOGY

Polyurethane-polyurea Film-forming Polymers



REGULATORY



USA – EU – China – Australia – Canada - **COMPLIANT**

Free of: Formaldehydes, siloxanes, parabens, sulphates, amines, acrylates, phthalates, artificial colorants, SVHC, gluten, BSE, triclosan, aluminum, VOC, 1,4- dioxane, nitrosamines, pesticides, propylene glycol, diethylene glycol, among other common allergens

Vegan & Earth-friendly

Not animal tested

ECOPOL TECH



**COSMETIC
POLYMERS**

ECO FILMCARE

Bio-based film-former with anti-abrasion properties.

ECO SELF-HEAL

Bio-based film-former with self-healing properties.

ECOPOLDERM

Emollient/conditioning low molecular weight polymer.

ECOSUN

Ethanol-based film-former with SPF-boosting properties.

ELYSAN

Hair conditioning/moisturizing elastic polymer.

ELYSAN PLUS

Hair conditioning/moisturizing elastic polymer. Water-resistant.

ECOREPAIR

Keratin-targeted hair repairing polymer.

ECOCAPI

Cationic polymer with high hair affinity.

ECO-INTER-F2/F3

Poly alphaolefin-co-maleic anhydride (C12, C14) polymeric additive served in oil solvent.

ECOPOL TECH



COSMETIC
POLYMERS

ECO FILMCARE

Chemistry: Anionic aqueous dispersion of organic-inorganic hybrid cross-linked polyurethane.

APP: This polymer is designed for high humidity and abrasion resistance in hair styling and advanced nail polish products.

INCI Adopted: Aqua (and) Diethylene Glycol/Dimer Dilinoleic Acid Copolymer (and) PPG-17/IPDI/DMPA Copolymer (and) Aminopropyl Triethoxysilane.

ECOPOL TECH



COSMETIC
POLYMERS

ECO SELF-HEAL

Chemistry: Cationic aqueous dispersion of organic-inorganic hybrid cross-linked polyurethane.

APP: This polymer is designed to self-heal and mask minor cuts and scratches and is especially recommended for advanced hair repair treatments and high-end nail polish products.

INCI Adopted: Aqua (and) Dilinoleyl Alcohol/IPDI Copolymer (and) PEG-800 (and) Aminopropyl Triethoxysilane.

ECOPOL TECH



COSMETIC
POLYMERS

ECOPOLDERM

Chemistry: Low molecular weight diurethane derived from IPDI.

APP: Hydrophobic film-forming emollient, plasticizer and conditioning agent for hair care and skin care with high pH and thermal stability.

INCI: Dioctyldodecyl IPDI

ECOPOL TECH



COSMETIC
POLYMERS

ECOSUN

Chemistry: Polyurethane-polyurea ethanol solution.

APP: Ethanol-based film-forming polymer for sunscreen applications. Great performance as SPF booster providing high water resistance in wet skin application. Also useful for hair styling sprays and aerosol sprays to provide high flexibility, frizz protection and light weight hold.

INCI: Polyurethane-64.

ECOPOL TECH



COSMETIC
POLYMERS

ELYSAN

Chemistry: Anionic aqueous dispersion of aliphatic polyester-polyurethane.

APP: Designed to be included in face masks, sunscreens, conditioners, hair masks and hair-sprays to provide SPF-boosting, light weight film-formation and high elasticity. Specially recommended for damaged, rebel and curled hair.

INCI: Polyurethane-34

ECOPOL TECH



COSMETIC
POLYMERS

ELYSAN PLUS

Chemistry: Anionic aqueous dispersion of aliphatic polyester-polyurethane.

APP: Designed to be included in face masks, sunscreens, conditioners, hair masks and hair-sprays to provide SPF-boosting, light weight film-formation and high elasticity. Specially developed to ensure a higher wash resistance and binding.

INCI: Polyurethane-35

ECOPOL TECH



COSMETIC
POLYMERS

ECOREPAIR

Chemistry: Aqueous dispersion of polyurethane-polyurea-siloxane with free thiol groups

APP: Hair repairing agent, which creates a hydrophobic film around damaged hair through specific interaction with keratin proteins through disulphide bonding and hydrophobia.

It provides the following properties:

- Hair protection
- Anti-moisture effect
- Anti-dirtiness effect
- Anti-static action

INCI Adopted: Aqua and Dimethicone/Mercaptopropyl Methicone Copolymer (and) PEG-100/IPDI

ECOPOL TECH



COSMETIC
POLYMERS

ECOCAPI

Chemistry: Aqueous-based cationic polyacrylamide.

APP: High affinity as hair-fixing, film-former and hair-binding agent in conditioners, shampoos and masks. Also useful in shaving gels and balms to add lubricity and slip.

INCI: Polyquaternium 5.

ECOPOL TECH



COSMETIC
POLYMERS

ECO-INTER-F2/F3

Chemistry: Poly alphaolefin-co-maleic anhydride (C12, C14) polymeric additive served in oil solvent.

APP: Reactive prepolymer intermediate. Useful to conjugate amino-reactive molecules via polyamide bonds. It allows the development of polymer conjugates with tunable hydrophobicity, bioactivity, ionicity, among others.

ID: Poly alphaolefin-co-maleic anhydride (C12, C14)

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