



Ashland Care Specialties

Advancing skin care with science

ASHLAND®

With good chemistry great things happen.™

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Introduction

Creating market-changing technologies and customer-driven solutions, Ashland Care Specialties is a leading innovator of ingredients that help to protect, renew, moisturize and revitalize skin. We understand that the largest organ of the human body – skin – requires specialized care throughout our lives.

That's why our R&D and material scientists remain committed to advancing the science of skin care. We can better serve formulators of face, body, sun, wound and other products with new application-specific solutions. Leveraging our science and consumer research, the Ashland skin care team collaborates with formulators to bring novel ingredients and formulating approaches to the global market.

Ashland is one of the few skin care ingredient innovators in the world to bring all of the technical disciplines together in pursuit of higher value solutions, **including molecular science, analytical science, microbiology research, materials science, encapsulation science, consumer science and applications development.**

Just as important, these technical resources may be leveraged in support of customers with specific performance and cost parameters virtually anywhere in the world. A global business with technical centers of excellence located throughout Asia, Europe and the Americas, Ashland is equipped to serve customers in a way that allows product makers to act on new ideas and new technologies and to solve difficult formulating challenges without delay.

A World-leading Skin Care Ingredient Portfolio

Ashland Care Specialties is the No.1 market leader in most ingredient segments that touch nearly every skin care application. Our product portfolio, produced in accordance with world-class manufacturing standards, includes natural and eco-friendly biofunctionals, with hundreds of products that help to fight aging, detoxify, firm, nourish, revitalize, smooth and more – all of which add value and novelty for end consumers.

Beyond this, if you require an ingredient for better emolliency, rheology modification, or encapsulation of key ingredients, a preservation solution, higher SPF retention or improved water resistance, we have the ingredient technology you require for virtually every skin care application.

Antiperspirants/Deodorants

Consumers around the world are increasingly aware that their personal hygiene is a reflection on themselves. Accordingly, demand for antiperspirant and deodorant formulations have increased dramatically around the world. This has prompted formulators to consider new more innovative products. Ashland offers a range of unique ingredients to provide stabilization, feel and enhanced performance in both antiperspirant and deodorant formulations.



Body Care

Nourish, moisturize, protect. Ashland gives you the tools to create effective global body care formulations. Whether you are looking for an emollient that absorbs quickly with a light and dry feel or one that helps reduce the greasiness of high oil products our Ceraphyl™ ester's range delivers what you need. Our Lubrajel* hydrogel line of multifunctional ingredients can help your formulation while providing moisturizing and emolliency benefits. To help ensure your valuable brands remain safe and effective, we also offer a complete line of preservation options.

In addition, the Natriance™ extract line, a range of simple and essential botanicals, offers clinically proven benefits to moisturize, help illuminate, limit signs of time, help maintain sun defense capital and renovate the skin surface.



* Trademark owned by a third party

Color Cosmetics

Today's consumers look to color cosmetics to deliver more than just color. Our technical experts at Ashland discovered ways to help mascara perform with curling, volume, water resistance and shine. For makeup foundations, they innovated methods and formulations to demonstrate high performance for immediate and long term transfer resistance and overall improved appearance. Ashland innovation can help meet the consumer demand for color cosmetic performance.



Facial Care

Facial care products help to improve our appearance and alleviate the effects of time and stress. At Ashland, we have made the beauty and the well being of consumers the heart of our skin care strategy. We offer state-of-the-art biofunctionals at the forefront of innovation, polymers, emollients and emulsifiers. But beyond products, we understand the arts of formulation and sensory evaluation, skills that set us apart in this marketplace. Through our range of polymers, emollients or emulsifiers, Ashland is dedicated to supporting scientists and formulators in their effort to commercialize facial care products of distinction.



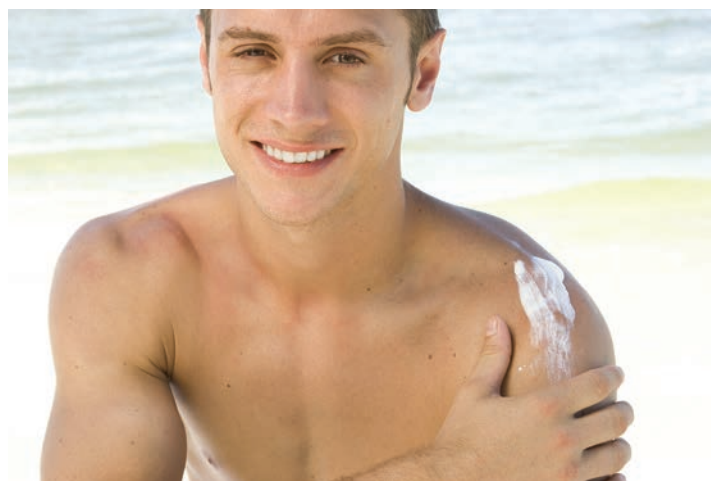
Rinse-Off/Cleansing

Over the past few years, consumer awareness and the need for general hygiene products has grown dramatically. However, this does not mean that every region of the world has the same requirements for the products they use to cleanse and shave. Ashland has a number of key ingredients that enhance skin rinse-off formulations. Our ingredients allow unique formulations by providing thickening and rheology modification, deposition of key ingredients onto the skin and a variety of sensory benefits.



Sun Care

Ashland helps sun care formulators create winning products with some of the most sophisticated, sun care technologies commercially available today. The comprehensive Ashland portfolio includes UV filters, water-resistant agents, solvents, moisturizers, preservatives, rheology modifiers, emollients, encapsulates and special patent-pending sunscreen formulations.



Inspiring a More Youthful Appearance...

Our product portfolio offers breakthrough ingredients, including natural and eco-friendly biofunctionals, with hundreds of products that help to fight aging, detoxify, firm, nourish, revitalize, smooth and more – all of which add value and novelty for end consumers. Emulsifiers, emollients, encapsulates, skin conditioners, UV filters, water-resistant agents, biofunctionals, preservatives and rheology modifiers complete the Ashland skin care line.



Biofunctional Ingredients

Vincience™ biofunctionals

The Vincience biofunctional ingredient portfolio has been designed with a profound understanding of skin biology and includes botanical ingredients, synthetic peptides, and ingredients based on biotechnologies or biosynthesis. At the Global Skin Research Center, located in Sophia Antipolis, France, a dedicated team of research scientists are continuously investigating skin biology, evaluating ingredient performance, and developing the next generations of biofunctional ingredients. By employing *in vitro*, *ex vivo* and other clinical evaluation methods, we can quickly and effectively substantiate the claims and benefits of this industry-leading portfolio.

Trade Name	INCI Name	Description	Anti-aging	Anti-stress	Anti-wrinkle	Antioxidant	Anti-glycation	Hair Care	Lip	Moisturizing	Nourishing	Sebum	Skin Energizer	Skin Brightener	Skin Protection	Skin Renewal	Skin Soother	Skin Tensor	Body Contour	Skin Tone
Achromaxyl™ ISR	Water (and) Glycerin (and) Hydrolyzed Brassica Napus Seedcake Extract	A skin brightening botanical extract with clinically proven efficacy on the appearance of skin color and reducing age spots.	•											•						
Acnacidol™ BG	Butylene Glycol (and) 10-Hydroxydecanoic Acid (and) Sebacic Acid (and) 1,10-Decanediol	A clinically tested Royal Jelly mimetic that helps balance sebum.										•								
Actopontine™	Water (and) Butylene Glycol (and) sh-Hexapeptide-2	Bioinspired by nature to optimize skin matrix architecture.	•												•	•			•	
Actopontine YST	Water (and) Glycerin (and) Hydrolyzed Yeast Protein	Bioinspired by nature to optimize skin matrix architecture.	•												•	•			•	
Aqua-Osmoline™	Water (and) Glycerin (and) Ceratonia Siliqua (Carob) Seed Extract	Targets water control for improved hydration and skin glow.								•					•					
Aquarize IS™	Water (and) Butylene Glycol (and) Hydrolyzed Rice Extract	An anti-aging skin-moisturizing rice extract with clinically proven efficacy on short-term and long-term hydration of the skin.	•							•										
ATPeptide™ IS	Water (and) Butylene Glycol (and) Tripeptide-3	An energy-boosting peptide specially designed to help revitalize aging skin as well as help smooth the appearance of cellulite prone skin.											•						•	
Caspaline 14™	Water (and) Propanediol (and) Hexapeptide-42	A synthetic peptide to help enhance skin's natural UV defenses and help fight the signs of aging.	•							•					•					
Chondricare™ IS	Water (and) Butylene Glycol (and) Pentapeptide-28	A peptide designed to fight the signs of aging.	•	•									•		•					
Chronogen™	Water (and) Butylene Glycol (and) Tetrapeptide-26	A tetrapeptide inspired by the principles of advanced molecular biology and epigenetic science designed to fight the signs of aging.	•	•											•					
Chronogen YST	(Proposed): Water (and) Glycerin (and) Hydrolyzed Yeast Protein	Innovative anti-aging tetrapeptide, designed using advanced molecular biology and inspired by epigenetic science.	•	•											•					
Collaxyl™ IS	Water (and) Butylene Glycol (and) Hexapeptide-9	A peptide designed to fight the signs of aging and clinically proven to help visibly reduce the length and depth of wrinkles.	•		•											•				
Cotton Bloom™ 5S	Water (and) Glycerin (and) Hydrolyzed Cottonseed Extract (and) Trehalose (and) Glucose (and) Fructose (and) Sucrose (and) Inositol	Composed of oligosaccharides designed to improve skin's hydration and resistance to stress.		•						•	•				•					
D'Orientine™ S	Caprylic/Capric Triglyceride (and) Phoenix Dactylifera (Date) Seed Extract	A date palm kernel extract with clinically proven anti-wrinkle properties; its free radical scavenging properties help protect skin from environmental sources of aging and wrinkling.	•		•	•														
Dermostatyl™ IS	Water (and) Butylene Glycol (and) Hexapeptide-2	Anti-aging peptide, inspired by epigenetic science related to collagen renewal and melanin regulation, to help improve the appearance of wrinkles and lighten skin tone.	•		•									•		•				

Trade Name	INCI Name	Description	Anti-aging	Anti-stress	Anti-wrinkle	Antioxidant	Anti-glycation	Hair Care	Lip	Moisturizing	Nourishing	Sebum	Skin Energizer	Skin Brightener	Skin Protection	Skin Renewal	Skin Soother	Skin Tensor	Body Contour	Skin Tone
Dynachondrine™ ISR	Water (and) Glycerin (and) Hydrolyzed Soy Protein (and) Sodium Benzoate (and) Potassium Sorbate	A bioenergizing botanical extract.	•	•		•							•		•					
Ederline™ S	Hexyldecanol (and) Butylene Glycol (and) Pyrus Malus (Apple) Seed Extract	An apple seed extract with clinically proven wrinkle reduction properties that helps to rejuvenate aged skin.	•		•															
Elixiance™	INCI (proposed name): Propanediol (and) Water/ Aqua (and) Schinus Molle Extract	Natural and sustainable Peruvian Schinus Molle extract with pollution-shielding, skin-purifying and age-perfecting benefits.	•	•		•	•			•		•			•					
GP4G SP	Water (and) Artemia Extract	Aquatic energizing and protecting plankton nucleotides to help the skin absorb environmental aging shocks.	•	•	•	•							•	•	•					
Heliostatine ISR™	Water (and) Glycerin (and) Pisum Sativum (Pea) Extract	A botanical extract with clinically proven tan enhancement effect for a healthy glow and radiance.	•												•		•			•
Laminixyl IS™	Water (and) Butylene Glycol (and) Heptapeptide-8	A laminin-5 peptide designed to help maintain skin integrity and youthful appearance.	•																	
Lipigenine™	Water (and) Glycerin (and) Linum Usitatissimum (Linseed) Seed Extract	Advancing physical and biochemical skin barrier functions.								•	•				•					
Marine Hydrolyzed Collagen LMW™	Water (and) Hydrolyzed Collagen	Marine collagen oligopeptides.	•					•			•									
Neoglycogen	Dextrin	A nourishing and energizing botanical glucose polymer mimetic of glycogen.									•		•							
Neomatrix™	Water (and) Glycerin (and) Pentapeptide (proposed)	Inspired by wound healing science and stratifin epidermal biomessenger linked with dermal remodeling and wrinkle repair.	•		•				•											
Oleanoline™ IS	Olea Europaea (Olive) Fruit Oil (and) Olea Europaea (Olive) Leaf Extract	An olive leaf extract that detoxifies and clarifies skin and is clinically proven to improve the appearance of irritated skin.								•					•		•			
Orsirtine™ ISR	Water (and) Glycerin (and) Oryza Sativa (Rice) Extract	A breakthrough anti-aging technology based on sirtuins to be used in facial products for long-term benefits and protection of the skin.	•												•					
Oxygenated Glycerol Triesters D	Oxidized Corn Oil	Clinically shown to help improve scalp condition; helps provide comfort and soothing properties.						•									•			
Peptide Q10™	Water (and) Propanediol (and) Pentapeptide-34 Trifluoroacetate	A bioengineered peptide that fights the signs of aging and is inspired by the antioxidant properties of Coenzyme Q10.	•		•	•							•							
Peptide Vinci 02™ IS	Water (and) Butylene Glycol (and) Hexapeptide-3	A peptide designed to promote skin's natural renewal; has also been clinically proven to help give the appearance of plump lips.	•						•							•				

Trade Name	INCI Name	Description	Anti-aging	Anti-stress	Anti-wrinkle	Antioxidant	Anti-glycation	Hair Care	Lip	Moisturizing	Nourishing	Sebum	Skin Energizer	Skin Brightener	Skin Protection	Skin Renewal	Skin Soother	Skin Tensor	Body Contour	Skin Tone
Perenityl™ IS	Hexyldecanol (and) Pyrus Communis (Pear) Seed Extract	An anti-wrinkle pear seed extract, shows consumer perceivable wrinkle reduction and significant improvement in skin surface appearance.	•		•															
Phytocohesine™ PSP	Sodium Beta-Sitosteryl Sulfate (and) Beta-Sitosterol	Visibly improves skin appearance and helps protect skin from environmental stress.	•							•					•	•				
Phytoquintescine ISR™	Water (and) Glycerin (and) Hydrolyzed Triticum Monococcum Seed Extract	An antioxidant, anti-stress, peptide that fights the signs of aging and is designed to help protect skin from environmental stresses as well as to help preserve skin resiliency.	•	•		•	•								•					
Prolixir S20™	Water (and) Butylene Glycol (and) Dimer Tripeptide-43	Designed to help skin age gracefully.	•			•														
Quintescine™ IS	Water (and) Butylene Glycol (and) Dipeptide-4	A glutathione-biomimetic antioxidant peptide designed to help preserve against glycation damage; helps protect skin from environmental stresses and helps preserve skin resiliency.	•	•		•	•								•					
Signaline™ S	Olea Europaea (Olive) Fruit Oil (and) Simmondsia Chinensis (Jojoba) Seed Extract	A botanical inspired by the science of cellular activation signaling and designed to improve and maintain youthful skin appearance.	•										•							
Suberlift™	Dipropylene Glycol (and) Quercus Suber Bark Extract	A clinically proven oil soluble botanical instant smoothing tensor that helps provide lift and firming to skin.																•		
Survixyl IS™	Water (and) Butylene Glycol (and) Pentapeptide-31	Inspired by the science of stem cell biology and the potential benefits of maintaining the Stemness Recovery Complex™.	•												•	•				
Telosense™	Water (and) Glycerin (and) Hydrolyzed Yeast Protein (and) Hydrolyzed Soy Protein	Designed to reduce the signs of aging. It has been shown <i>in vitro</i> to help maintain the TRF2 proteins.	•		•										•					
UCPeptide™ V	Water (and) Butylene Glycol (and) Pentapeptide-25	An innovative peptide to help improve the appearance of cellulite.																	•	
Vegetal Ceramides BGS	Butylene Glycol (and) Oryza Sativa Rice Bran Extract	A rice extract clinically proven to improve skin moisturization.								•										
Vital ET™	Disodium Lauriminodipropionate Tocopheryl Phosphates	A unique biofunctional complex of tocopheryl phosphate (Vitamin E derivative) designed for sensitive skin, which helps reduce the appearance of redness and swelling on skin.													•		•			

The testing information (the "Testing Information") has been gratuitously provided by Ashland. The Testing Information is based on many factors beyond Ashland's control, including but not limited to, the conditions prevailing when the testing was conducted, and in some cases, is based on data generated with development samples of the Active Ingredient. Although it is intended to be accurate, ASHLAND DISCLAIMS ANY AND ALL LIABILITY, EITHER EXPRESS OR IMPLIED. The Testing Information is confidential or proprietary to Ashland, and may not, except as provided below, be disclosed to any third party. You may not make commercial use of the Testing Information, or make claims with respect to your products based the Testing Information, without the written agreement with Ashland covering such use.



Conditioning Polymers

AquaCat™ clear cationic solutions

AquaCat clear cationic solutions are aqueous solutions of cationic guar, developed specifically for use as substantive polymeric conditioners. They have been shown to be compatible, and to maintain unsurpassed finished product clarity with a wide variety of both anionic and amphoteric surfactant blends. Finished product clarity may be achieved even at relatively high use levels. AquaCat solutions are supplied as ready-to-use, 10% nominal solids, clear liquid, odor-free solutions, requiring no heat or pH adjustment.

Trade Name	INCI Name	Features and Benefits
AquaCat PF618 and CG518 solutions	Guar Hydroxypropyltrimonium Chloride	<ul style="list-style-type: none">• Provides light skin conditioning• Easy-to-use liquid version• Enables creation of clear formulations• Clean smooth skin feel• PF618 is preserved without parabens

Conditioneze™ 7MP/7SB cationic solutions

Conditioneze 7MP cationic solution is a cationic aqueous solution of diallyl dimethyl ammonium chloride (DADMAC) and acrylamide copolymer. This water-soluble polymer provides effective conditioning, is substantive and imparts good skin feel in personal care applications. A parabens-free version is also available (7SB).

Trade Name	INCI Name	Features and Benefits
Conditioneze 7MP cationic solution	Polyquaternium-7	<ul style="list-style-type: none">• Enables creation of clear formulations• Efficient conditioning at low concentrations• Imparts slip and lubricity to formulations• Provides foam stability• Boosts viscosity with increasing concentration• Compatible with a wide range of anionic, nonionic and cationic surfactants
Conditioneze 7SB cationic solution	Polyquaternium-7	<ul style="list-style-type: none">• Enables creation of clear formulations• Efficient conditioning at low concentrations• Imparts slip and lubricity to formulations• Provides foam stability• Boosts viscosity with increasing concentration• Compatible with a wide range of anionic, nonionic and cationic surfactants• Preserved with sodium benzoate

Conditioneze™ NT-20 cationic solution

Conditioneze NT-20 cationic solution, a copolymer of vinylpyrrolidone and methacrylamidopropyl trimethylammonium chloride, delivers excellent lather properties and permits cold processing during formulation. An Optiphen™ preservative preserved version is also available as Conditioneze NT-20-O cationic solution.

Trade Name	INCI Name	Features and Benefits
Conditioneze NT-20 cationic solution	Polyquaternium-28	<ul style="list-style-type: none">• Provides excellent lather properties• Able to use in cold process formulas• Compatible with a wide range of anionic, nonionic and cationic surfactants

N-Hance™ cationic guar

N-Hance cationic guar are cationic polymers that provide the dual benefits of conditioning and thickening. The cationic charge makes the product substantive to anionic surfaces such as skin. Though cationic, it is compatible with most anionic and amphoteric surfactants. The high molecular weight, water-soluble backbone creates viscosity in aqueous solutions.

Trade Name	INCI Name	Features and Benefits
N-Hance 3000, C261N, 3196, 3215 cationic guar	Guar Hydroxypropyltrimonium Chloride	<ul style="list-style-type: none">• Provides a wide range of conditioning formulations• For use in translucent or opaque formulations
N-Hance C261, CG13 cationic guar	Guar Hydroxypropyltrimonium Chloride	<ul style="list-style-type: none">• Self hydrating• Provide light to medium conditioning and deposition
N-Hance CCG45 cationic guar	Guar Hydroxypropyltrimonium Chloride	<ul style="list-style-type: none">• Enables creation of clear formulations• Provides medium conditioning and deposition to formulations
N-Hance BF-17 and BF-13 cationic guar	Guar Hydroxypropyltrimonium Chloride	<ul style="list-style-type: none">• For use in translucent or opaque formulations• Boron free grade• BF-17 provides the highest conditioning and deposition of the N-Hance cationic guar line
N-Hance HPCG 1000 cationic guar	Hydroxypropyl Guar Hydroxypropyltrimonium Chloride	<ul style="list-style-type: none">• Enhances both wet and dry skin after-feel• Stabilizes lather• Imparts creamier, denser foam

N-Hance conditioning polymers

The use of Ashland's synthetic cationic polymers helps formulators to improve deposition of oil soluble materials to the skin from a rinse-off formulation. The ability to reduce the load of these expensive actives up to 50% along with low use levels aid in the creation of cost effective formulas. All are compatible with a wide range of anionic, nonionic and cationic surfactants.

Trade Name	INCI Name	Features and Benefits
N-Hance SP-100 conditioning polymer	Acrylamidopropyltrimonium Chloride/ Acrylamide Copolymer	<ul style="list-style-type: none">• Provides high deposition of oil-soluble actives• Enables creation of clear formulations• Helps to build viscosity
N-Hance 4572 conditioning polymer	Guar Hydroxypropyltrimonium Chloride (and) Acrylamidopropyltrimonium Chloride/ Acrylamide Copolymer	<ul style="list-style-type: none">• Synergistic cationic blend of synthetic and naturally derived polymers• Provides high deposition of oil-soluble actives

Emollients

Ceraphyl™ esters

The consumer acceptance of cosmetic preparations depends significantly on the tactile properties associated with the product, both prior to and during application. Therefore, combinations of emollients with various spreading rates are used to provide the consumer with elegant formulations with exceptional sensory distinction, from initial product application to residual after-feel. When selecting the proper emollient or emollient blend, it is important to understand that its performance in a formulation is based on various characteristics such as chemical structure, polarity, molecular weight, solubilizing ability, hydrolytic stability and permeability.

The Ceraphyl esters range provides a variety of emollients to deliver unique attributes and meet formulation requirements, including:

- Esters based on alpha hydroxy acids
- General purpose esters
- Esters with elegant skin feel
- Esters with natural appeal
- Light, dry feeling esters
- Esters that impart body
- Esters for maximum after-feel
- Esters for rinse-off products

Trade Name	INCI Name	Features and Benefits
Esters Based on Alpha Hydroxy Acids		
Ceraphyl 28 ester	Cetyl Lactate	<ul style="list-style-type: none">• Enhances slip• Increases pay-off• Non-oily, non-drying, non-greasy after-feel• Imparts sheen and silkiness to skin• Reduces tack

Trade Name	INCI Name	Features and Benefits
Esters Based on Alpha Hydroxy Acids		
Ceraphyl 31 ester	Lauryl Lactate (and) Myristyl Lactate (and) Cetyl Lactate	<ul style="list-style-type: none"> • Plasticizing and de-tackifying agent • Highly effective emolliency with lubricity • Improves product slip upon application
Ceraphyl 41 ester	C12-15 Alkyl Lactate	<ul style="list-style-type: none"> • Effective de-tackifying agent • Spreads easily when applied • Dry initial feel with non-oily after-feel • Provides viscosity building and lather creaminess to body washes • Effective solubilizer for sunscreen actives
Ceraphyl 45 ester	Diethylhexyl Malate	<ul style="list-style-type: none"> • Unique silky feel • Reduces greasiness of mineral oil and petrolatum • De-tackifier • Effective solubilizer for sunscreen actives
Ceraphyl 50 ester	Myristyl Lactate	<ul style="list-style-type: none"> • Imparts soft, silky feel on skin with non-oily after-feel • Imparts lubricity • Provides creamy texture to lipsticks
Light, Dry Feeling Esters		
Ceraphyl 140 ester	Decyl Oleate	<ul style="list-style-type: none"> • Excellent spreadability with dry initial feel • Very little residual after-feel
Ceraphyl 140A ester	Isodecyl Oleate	<ul style="list-style-type: none"> • Excellent spreadability with dry initial feel • Drier feel than Ceraphyl 140 due to branching • Very little residual after-feel
Ceraphyl 230 ester	Diisopropyl Adipate	<ul style="list-style-type: none"> • Effective plasticizer and de-tackifier • Reduces greasiness of high-oil products • Spreads rapidly • Imparts dry initial feel with little to no residual after-feel • Coupling agent for hydroalcoholic preparations
Ceraphyl ICA ester	Isocetyl Alcohol	<ul style="list-style-type: none"> • Non-greasy, non-occlusive emolliency • Unique dry initial feel with non-greasy after-feel • Little to no taste; acts as a coupler for mineral oil and castor oil • Excellent carrier and extender for fragrance oils • Effective pigment dispersing agent
Ceraphyl SLK ester	Isodecyl Neopentanoate	<ul style="list-style-type: none"> • Light feeling • Non-greasy • Silky touch • Reduces oily, heavy feel of other ingredients
General Purpose Esters		
Ceraphyl 368M ester	Ethylhexyl Palmitate	<ul style="list-style-type: none"> • Non-occlusive • Non-oily after-feel • Suitable mineral oil replacement for beach protection formulations • No impact on absorbance curves of UV actives • Acts as a binder for pressed powders • Good makeup remover
Ceraphyl 494 ester	Isocetyl Stearate	<ul style="list-style-type: none"> • All-purpose lubricant which imparts dry, emollient feel
Esters that Impart Body		
Ceraphyl 424 ester	Myristyl Myristate (and) Myristyl Laurate	<ul style="list-style-type: none"> • Enhances spreadability and reduces drag upon product application • Velvety after-feel on skin • Liquifies upon contact with the body
Emulsynt GDL ester	Glyceryl Dilaurate	<ul style="list-style-type: none"> • Liquifies when applied to the body • Offers smooth, silky, emollient skin feel
Esters with Elegant Skin Feel		
Ceraphyl 55 ester	Tridecyl Neopentanoate	<ul style="list-style-type: none"> • Imparts elegant, light, non-oily feel
Ceraphyl 375 ester	Isostearyl Neopentanoate	<ul style="list-style-type: none"> • Improves product spreadability and playtime • Imparts elegant, light, non-oily feel
Ceraphyl ODS ester	Octyldodecyl Stearate	<ul style="list-style-type: none"> • Imparts dry initial feel, luxurious mid-feel with a silky after-feel • Enhances product spreadability • Exceptional powder binding properties when blended with Ceraphyl 847 (1:1)

Trade Name	INCI Name	Features and Benefits
Esters for Maximum After-feel		
Ceraphyl 791 ester	Isocetyl Stearoyl Stearate	<ul style="list-style-type: none"> Complies with many organic and/or natural certifications, such as EcoCert Imparts dry initial feel with lubricious after-feel Long-lasting emollient Little to no taste or odor
Ceraphyl 847 ester	Octyldodecyl Steroyl Stearate	<ul style="list-style-type: none"> Complies with many organic and/or natural certifications, such as EcoCert Offers dry initial feel with long-lasting cushiony, rich after-feel Exceptional pigment dispersing and binding properties when blended with Ceraphyl ODS (1:1)
Esters with Natural Appeal		
Orchid™ Complex OS ester	Caprylic/Capric Triglyceride (and) Cymbidium Grandiflorum Flower Extract	<ul style="list-style-type: none"> Complies with many organic and/or natural certifications, such as EcoCert Enhances product spreadability Offers smooth, light, silky after-feel
Esters for Rinse-off Products		
Ceraphyl RMT ester	Castoryl Maleate	<ul style="list-style-type: none"> Offers clinically-proven moisturization in rinse-off products
Ceraphyl 60 ester	Quaternium-22	<ul style="list-style-type: none"> Mild cationic with pronounced substantivity to skin and hair Provides detangling, anti-static, moisture binding and conditioning properties in hair care applications
Ceraphyl 65 ester	Propylene Glycol (and) Quaternium-26	<ul style="list-style-type: none"> Mild cationic with pronounced substantivity to skin and hair Provides detangling, anti-static and conditioning properties
Ceraphyl 70 ester	Quaternium-70 (and) Propylene Glycol	<ul style="list-style-type: none"> Mild cationic with pronounced substantivity to skin and hair Provides detangling, anti-static and conditioning properties

Emulsifiers

Cerasynt™ esters

The Cerasynt esters range provides a variety of emulsifiers to enhance skin care formulations.

Trade Name	INCI Name	Features and Benefits
Cerasynt IP ester	Glycol Stearate (and) Stearamide AMP	<ul style="list-style-type: none"> Imparts pearlescence and opacity Co-emulsifier for creams and lotions HLB 3
Cerasynt M	Glycol Stearate	<ul style="list-style-type: none"> Secondary non-ionic stabilizer for lotions and creams Produces pearlescence in liquid soaps
Cerasynt PA ester	Propylene Glycol Stearate	<ul style="list-style-type: none"> Imparts pearlescence and opacity Nonionic emulsifier for creams and lotions HLB 3
Cerasynt Q	Glyceryl Stearate SE	<ul style="list-style-type: none"> Excellent anionic, oil-in-water auxiliary emulsifier Applicable for soap based, oil-in-water emulsions
Cerasynt 945 ester	Glyceryl Stearate (and) Laureth-23	<ul style="list-style-type: none"> Nonionic primary emulsifier High pH tolerance Forms opaque gels with mineral oil HLB 7-8
Cerasynt SD ester	Glyceryl Stearate	<ul style="list-style-type: none"> Nonionic auxiliary emulsifier Emulsion stabilizer HLB 3



Natriance™ extracts

In a market dominated by complex skin care solutions, the Natriance extracts line is comprised of natural, simple ingredients offering clinically proven skin benefits to address essential consumer needs. Natriance extracts provide gentle bioefficacy respecting the genuine nature of the skin. Easy to understand and easy-to-use, this line of ingredients, which is inspired by nature, is simply essential for truly efficacious body care and face care formulations.

Trade Name	INCI Name	Features and Benefits
Natriance Brightener extract	Water (Aqua) (and) Glycerin (and) Hydrolyzed Yeast Protein	<ul style="list-style-type: none">• To brighten and illuminate the skin• Helps skin reveal its own radiance for a brighter and more luminous appearance
Natriance Renovate extract	Water (Aqua) (and) Glycerin (and) Hydrolyzed Linseed Extract	<ul style="list-style-type: none">• To help skin gently transform its surface and reduce flaws• Helps skin renovate its surface and transform the texture into a visibly renewed skin with fewer squames and flaws
Natriance Self-hydrate extract	Water (Aqua) (and) Propanediol (and) Pea (Pisum sativum) Extract	<ul style="list-style-type: none">• To teach skin self-moisturization
Natriance Solar Defense extract	Water (Aqua) (and) Propanediol (and) Hydrolyzed Soy Protein	<ul style="list-style-type: none">• To adapt skin to preserve sun defense capital and beauty• Helps skin preserve innate self-defense against solar radiation
Natriance Wrinkle-less extract	Water (Aqua) (and) Glycerin (and) Hydrolyzed Corn Protein	<ul style="list-style-type: none">• To erase signs of time and keep wrinkles away

The testing information (the “Testing Information”) has been gratuitously provided by Ashland. The Testing Information is based on many factors beyond Ashland’s control, including but not limited to, the conditions prevailing when the testing was conducted, and in some cases, is based on data generated with development samples of the Active Ingredient. Although it is intended to be accurate, ASHLAND DISCLAIMS ANY AND ALL LIABILITY, EITHER EXPRESS OR IMPLIED. The Testing Information is confidential or proprietary to Ashland, and may not, except as provided below, be disclosed to any third party. You may not make commercial use of the Testing Information, or make claims with respect to your products based the Testing Information, without the written agreement with Ashland covering such use.



Film-Formers

Aquaflex™ XL-30 polymer

Aquaflex XL-30 polymer is an amphoteric polymer with unique film properties that has demonstrated benefits in curling, volume boosting, and durable hold on hair and tightening on skin.

Trade Name	INCI Name	Features and Benefits
Aquaflex XL-30 polymer	Polyimide-1	<ul style="list-style-type: none">• Skin tightening• Eyelash curling• Volumizing effects

Gafquat™ polymers

Gafquat polymers (440, 755N, 755N-P, 755N-O) are quaternized copolymers of vinylpyrrolidone and dimethylaminoethyl methacrylate that form clear, non-tacky, continuous films. In skin care, they are used as an additive for improved skin feel. Alternate preservative versions: Gafquat 755N-P polymer (preserved with phenoxyethanol-paraben); Gafquat 755N-O polymer (preserved with Optiphen™ preservative).

Trade Name	INCI Name	Features and Benefits
Gafquat 440 polymer	Polyquaternium-11	<ul style="list-style-type: none">• Improves skin feel
Gafquat 755N polymer	Polyquaternium-11	

PrimaFlo™ HP22 polymer solution

PrimaFlo HP22 polymer solution is an aqueous solution of hydroxypropyl cellulose developed specifically for use as a film-former in personal care formulations. This easy-to-use polymer can readily be used in either water-based or hydroalcoholic systems and provides light, natural film forming properties in sun care, aftershave and bath care products.

Trade Name	INCI Name	Features and Benefits
PrimaFlo HP22 polymer solution	Hydroxypropylcellulose	<ul style="list-style-type: none">• Easy-to-use solution• Soluble in a broad range of solvents• Natural feeling film formation• Salt tolerance• Ability to create clear formulations

Lipid Lamellar Gel Systems

ProLipid™ lamellar gels

ProLipid lamellar gels are designed to exert a “second skin” effect, mimicking the unique lamellar organization of stratum corneum lipids. In addition, they enhance the performance of cosmetic formulations and can be used to develop stable lamellar gel networks with a wide range of rheologies and sensory attributes depending on the type of auxiliary ingredients present.

Trade Name	INCI Name	Features and Benefits
ProLipid 141 lamellar gel	Glyceryl Stearate (and) Behenyl Alcohol (and) Palmitic Acid (and) Stearic Acid (and) Lecithin (and) Lauryl Alcohol (and) Myristyl Alcohol (and) Cetyl Alcohol	<ul style="list-style-type: none"> Moisturizes and promotes healthy skin by enhancing skin's natural barrier function Delivery system for actives and particulates Provides slightly drier rubout with shorter playtime Masks undesirable sensory properties, such as oiliness Compatible over wide pH range and more resistant to rinse-off than traditional emulsifiers ECOCERT validated
ProLipid 151 lamellar gel	Glyceryl Stearate (and) Cetyl Alcohol (and) Stearyl Alcohol (and) Behenyl Alcohol (and) Palmitic Acid (and) Stearic Acid (and) Hydroxyethyl Cetearamidopropylidimonium Chloride	<ul style="list-style-type: none"> Moisturizes and promotes healthy skin by enhancing skin's natural barrier function Delivery system for actives and particulates Provides long playtime and a lightweight, moist feel during rubout Masks undesirable sensory properties, such as oiliness Compatible over wide pH range and resistant to rinse-off
ProLipid 161 lamellar gel	Cetearyl Alcohol (and) Behenyl Alcohol (and) Hydroxyethyl Cetearamidopropylidimonium Chloride	<ul style="list-style-type: none"> Composed of vegetal-based amphiphilic compounds Lamellar gel structuring ingredient that enhances formulation texture and stability Provides moisturization and conditioning Binder/Thickener Opacifying agent Substantive over a broad pH range

Liquid Crystals

Colorflow™ liquid crystals

Colorflow liquid crystals are unique blends of cholesteryl esters carefully formulated to produce an exciting range of ingredients. These special materials can provide an aesthetic quality to a range of aqueous gels and lip-gloss products. They have an occlusive emolliency when applied to the skin and have also been used to deliver and stabilize lipophilic ingredients. Flavors and fragrances can also be added.

Trade Name	INCI Name	Color	Features and Benefits
Colorflow 100 liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Chloride (and) Cholesteryl Nonanoate (and) BHT		<ul style="list-style-type: none"> Provides an aesthetic quality to a range of aqueous gels Deliver an occlusive emolliency when applied to the skin Have been used to deliver and stabilize lipophilic active ingredients Flavors and fragrances can be added
Colorflow 101 liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) BHT		
Colorflow 102 liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) BHT		
Colorflow 103 liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Chloride (and) Cholesteryl Dichlorobenzoate (and) Cholesteryl Nonanoate (and) BHT		
Colorflow 104P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Red 40 Lake (CI 16035) (and) BHT	Green/Red	
Colorflow 105P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Red 27 Lake (CI 45410:2) (and) BHT	Pink	
Colorflow 106P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Red 30 (CI 73360) (and) BHT	Pink	

Trade Name	INCI Name	Color	Features and Benefits
Colorflow 107P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Manganese Violet (CI 77742) (and) BHT	Purple	<ul style="list-style-type: none"> Provides an aesthetic quality to a range of aqueous gels Deliver an occlusive emolliency when applied to the skin Have been used to deliver and stabilize lipophilic active ingredients Flavors and fragrances can be added
Colorflow 108P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Red 36 (CI 12085) (and) BHT	Orange/Red	
Colorflow 109P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Red 27 Lake (CI 45410:2) (and) BHT	Red/Pink	
Colorflow 110P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Red 7 Lake (CI 15850:1) (and) BHT	Red	
Colorflow 111P liquid crystal	Cholesteryl Oleyl Carbonate (and) Cholesteryl Nonanoate (and) Cholesteryl Chloride (and) Manganese Violet (CI 77742) (and) BHT	Purple	

Microencapsulation

Captivates™ encapsulates

The Captivates encapsulates range includes standard and customizable microencapsulation products either by employing complex coacervation or JetCutter™ processes. Microencapsulated products are small particles that contain an active ingredient or core material surrounded by a shell or coating. Particle diameters generally range from a few microns to a few millimeters. Microencapsulated products may have different types of structures. These may be simple droplets of liquid core material surrounded by a spherical shell, or particles containing small droplets of core material dispersed in a continuous polymer shell matrix.

The Captivates HC encapsulates series is made up of a complex coacervate based on naturally derived polymers which can contain a variety of lipophilic cosmetic ingredients.

The Captivates GL encapsulates series are gelled polymers made through JetCutter technology which form a hydrogel matrix that can trap insoluble powders and oils.

Trade Name	INCI Name	Composition	Features and Benefits
Captivates HC0001 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Blue beads in clear/hazy liquid Average size: 500 - 750 microns Wall type: Thin 	<ul style="list-style-type: none"> Can be customized in terms of size, color and ingredients Exciting visual impact Dynamic color release Novel delivery method Isolate and stabilize incompatible ingredients Provides texture and sensory signals Controlled fragrance delivery Biodegradable
Captivates HC0002 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Silver beads in clear/hazy liquid Average size: 1250 microns Wall type: Thin 	
Captivates HC0004 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Silver beads in clear liquid Average size: 750 - 1000 microns Wall type: Thin 	
Captivates HC0005 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Pink beads in clear/hazy liquid Average size: 1250 - 1500 microns Wall type: Thick 	

Trade Name	INCI Name	Composition	Features and Benefits
Captivates HC0006 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Orange beads in clear/hazy liquid Average size: 1250 microns Wall type: Thin 	<ul style="list-style-type: none"> Can be customized in terms of size, color and ingredients Exciting visual impact Dynamic color release Unique delivery method Isolate and stabilize incompatible ingredients Provides texture and sensory signals Controlled fragrance delivery Biodegradable
Captivates HC0008 encapsulate	Mixture	<ul style="list-style-type: none"> Not available in NA Form: Glittery beads in clear/hazy liquid Average size: 1250 - 1500 microns Wall type: Thick 	
Captivates HC0009 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Blue/green beads in clear liquid Average size: 1500 microns Wall type: Thick 	
Captivates HC0012 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Red beads in clear liquid Average size: 1250 microns Wall type: Thin 	
Captivates GL 7661 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Pink beads in clear liquid Average size: Approx. 1200 microns Wall type: Alginate/Agar 	
Captivates GL 7615 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Gold beads in clear liquid Average size: Approx. 1300 microns Wall type: Carrageenan/Agar 	
Captivates GL 7542 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Green beads in clear liquid Average size: Approx. 1000 microns Wall type: Alginate/Agar 	
Captivates GL 7539 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Red beads in clear liquid Average size: Approx. 1000 microns Wall type: Alginate/Chitosan 	
Captivates GL 7600 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Silver beads in a clear liquid Average size: Approx. 3200 microns Wall type: Alginate/Agar 	
Captivates GL 7606 encapsulate	Mixture	<ul style="list-style-type: none"> Form: Yellow beads in a clear liquid Average size: Approx. 1200 microns Wall type: Alginate/Agar 	

Moisturizers

Lubrajel* hydrogels

Lubrajel hydrogels make products feel more elegant, deliver a multitude of functions and are easy to incorporate into a formulation. Lubrajel hydrogels are clathrates of glyceryl acrylate and polyacrylic acid that enclose water molecules and release them upon exposure to the skin's pH, surface moisture, and temperature. Hydrophilic gels consisting of a solvent, humectants and a polymer, this range of products delivers moisturizing benefits, can act as a thickening agent, and impart unique sensory attributes including enhanced lubricity and a smooth, velvety after-feel.

Trade Name	INCI Name	Features and Benefits
Lubrajel II XD hydrogel	Glycerin (and) Glyceryl Polyacrylate	<ul style="list-style-type: none"> • Superior moisturization • Globally approved with excellent skin compatibility • Imparts an inviting after-feel and slip • Excellent lubricity, spreadability and emolliency • Good auxiliary thickening, suspending power and viscosity enhancement • Broad formulation compatibility and long shelf life • Water-soluble
Lubrajel II XD Free hydrogel	Glycerin (and) Glyceryl Polyacrylate	
Lubrajel CG hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Propylene Glycol	
Lubrajel PF hydrogel (Preservative and Propylene glycol-free version of Lubrajel CG)	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	
Lubrajel DV hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Propylene Glycol	
Lubrajel DV Free hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	
Lubrajel MS hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Propylene Glycol	
Lubrajel MS Free hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	
Lubrajel NP hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	
Lubrajel NP Free hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	
Lubrajel Oil BG hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Butylene Glycol (and) PVM/MA Copolymer	
Lubrajel Oil hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Propylene Glycol (and) PVM/MA Copolymer	
Lubrajel Oil Free hydrogel	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) PVM/MA Copolymer	
Lubrajel TW hydrogel	Propylene Glycol (and) Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	<ul style="list-style-type: none"> • A naturally derived crosslinked polysaccharide complex providing multifunctional benefits including sensory improvement and emulsion stabilization • Ecocert validated • Useful in all types of cosmetic applications including creams and lotions, gels, foundations, sun care products and liquid soaps
Lubrajel WA hydrogel	Propylene Glycol (and) Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer	
Lubrajel Natural hydrogel	Glycerin (and) Beta-Glucan (and) Algin (and) Xanthan Gum	

Lubrasil* microemulsions

Lubrasil microemulsions are clathrates of glyceryl acrylate and polyacrylic acid that enclose water molecules. They are hydrophilic gels consisting of a solvent, humectants and a polymer. As a thickening agent, this range of products delivers moisturizing benefits and unique sensory attributes including enhanced lubricity. Lubrasil microemulsions add the smooth feel of silicone with the incorporation of dimethicone in a microemulsion. These silicone-containing formulations are multifunctional. As an emollient, film-former and water-resistant additive, the product range delivers advanced lubricity, moisturization and feel.

Trade Name	INCI Name	Features and Benefits
Lubrasil microemulsions	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Polysorbate 20 (and) Cyclopentasiloxane (and) Propylene Glycol (and) Dimethiconol	<ul style="list-style-type: none">• Superior moisturization• Globally approved with excellent skin compatibility and toxicity profile• Imparts an inviting after-feel and slip• Excellent lubricity, spreadability and emolliency• Good auxiliary thickening, suspending power and viscosity enhancement• Broad formulation compatibility and long shelf life• Water-soluble
Lubrasil II SB microemulsion	Glycerin (and) Glyceryl Acrylate/Acrylic Acid Copolymer (and) Laureth-23 (and) Cyclopentasiloxane (and) Dimethiconol	

Note: Lubrajel hydrogels and Lubrasil microemulsions are manufactured for Ashland Inc. by Guardian Laboratories, a division of United Guardian, Inc. The products are marketed and sold exclusively by an affiliate of Ashland Inc. in the Americas and selected parts of Europe and Asia; not available through such affiliate in the UK, France, Switzerland, Italy and Korea.
*Lubrajel and Lubrasil are registered trademarks of United Guardian, Inc.

Preservatives

Progressive preservatives

As personal care product manufacturers sell to an increasingly global client base, they need approved ingredients for easy navigation of regulatory requirements. Ashland’s family of progressive preservatives featuring the Optiphen™ preservative and Rokonsal™ preservative product lines is approved for use in all major markets, compatible with a variety of formulations and not based on paraben, formaldehyde or halogens. Effective against gram-positive and gram-negative bacteria, yeast and mold, they offer excellent heat stability, work across a wide pH window and could be solubilized in water.

Trade Name	INCI Name	Features and Benefits
Optiphen preservative	Phenoxyethanol (and) Caprylyl Glycol	<ul style="list-style-type: none">• Broad-spectrum activity against bacteria, yeast and mold• Effective over pH of 4 to 8• Global use †
Optiphen 200 preservative	Phenoxyethanol (and) Caprylyl Glycol	<ul style="list-style-type: none">• Broad-spectrum activity against bacteria, yeast and mold• Effective over pH of 4 to 8• Global use †
Optiphen 300 preservative	Phenoxyethanol (and) Caprylyl Glycol	<ul style="list-style-type: none">• Broad-spectrum activity against bacteria, yeast and mold, additional fungicidal protection may be needed in difficult formulations• Effective over pH of 4 to 8• Global use †
Optiphen Plus preservative	Phenoxyethanol (and) Caprylyl Glycol (and) Sorbic Acid	<ul style="list-style-type: none">• Broad-spectrum activity against bacteria, yeast and mold• Ideal for slightly acidic personal care products• Effective pH range up to 6• Global use †

Trade Name	INCI Name	Features and Benefits
Optiphen BSP / Rokonsal BSP preservatives	Phenoxyethanol (and) Propylene Glycol (and) Benzoic Acid (and) Sorbic Acid	<ul style="list-style-type: none"> • Microbiostatic spectrum of activity against bacteria • Effective up to pH 5.4 • Global use †
Optiphen ND / Rokonsal ND preservatives	Phenoxyethanol (and) Benzoic Acid (and) Dehydroacetic Acid	<ul style="list-style-type: none"> • Microbiostatic spectrum of activity against bacteria • Effective up to pH 6.4 • Global use †
Optiphen PO	Phenoxyethanol	<ul style="list-style-type: none"> • Microbiostatic activity • Wide pH 3 to 10 • Global use †, usually in combination with other actives

Nature-Identical preservatives

The natural movement continues to drive consumer buying habits, so it's no surprise that marketers also harbor a preference for all things green. That's why Ashland's nature-identical preservatives are ideal solutions for products aimed at the eco-aware consumer. EcoCert-, NaTrue-, COSMOS- and BDIH-compliant Rokonsal and Optiphen BS, BD and BSB-type preservatives are synthetic versions of naturally occurring substances with excellent efficacy and global approval for rinse-off and leave on applications. These effective preservatives support a variety of natural personal care products.

Trade Name	INCI Name	Features and Benefits
Optiphen BSB-N / Rokonsal BSB-N preservatives	Benzyl Alcohol (and) Glycerin (and) Benzoic Acid (and) Sorbic Acid	<ul style="list-style-type: none"> • Effective against gram-positive and gram-negative bacteria, yeast and mold • Effective up to pH 5.4 • Nature-identical combination • Global use †
Optiphen BSB-W preservative	Benzyl Alcohol (and) Aqua (Water) (and) Sodium Benzoate (and) Potassium Sorbate	<ul style="list-style-type: none"> • Effective against gram-positive and gram-negative bacteria, yeast and mold • Effective up to pH 5.4 • Nature-identical combination • Global use † • Not available in NA
Rokonsal BS preservative	Sodium Benzoate (and) Potassium Sorbate	<ul style="list-style-type: none"> • Microbiostatic spectrum of activity • Effective up to pH 5.4 • Nature-identical combination • Global use † • Not available in NA
Optiphen BD preservative	Benzyl Alcohol (and) Benzoic Acid (and) Dehydroacetic Acid	<ul style="list-style-type: none"> • Effective against gram-positive and gram-negative bacteria, yeast and mold • Effective up to pH 6.4 • Nature-identical combination • Global use † • Not available in NA

Aromatics with antimicrobial properties

Offering a rose-like aroma, Ashland's Conarom™ P aromatic, based on phenylethanol and caprylyl glycol, also delivers antimicrobial stabilization against gram-positive and gram-negative bacteria, mold and yeast.

Trade Name	INCI Name	Features and Benefits
Conarom P aromatic	Phenethyl Alcohol (and) Caprylyl Glycol (and) Trideceth-8	<ul style="list-style-type: none"> • Aromatic ingredient that provides broad-spectrum protection • Mild rose-like aroma • Complements aroma of final product • Effective pH range: 4 - 8

Classic preservatives

Germaben™ preservatives deliver efficient antimicrobial power to a wide variety of personal care products. Balanced, synergistic and boasting broad-spectrum protection, Germaben preservatives are compatible with many other cosmetic ingredients. Approved for use in most countries, these preservatives are effective at low doses and can be used to bolster other preservatives.

Trade Name	INCI Name	Features and Benefits
Germaben II / Germaben II-E preservatives	Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective over broad pH range: 3.0 - 7.5
Germall™ 115 preservative	Imidazolidinyl Urea	<ul style="list-style-type: none"> Very effective against gram-positive and gram-negative bacteria Acts synergistically with other preservatives Effective over broad pH range: 3 - 9 Global use †
Germall II preservative	Diazolidinyl Urea	<ul style="list-style-type: none"> Broad-spectrum activity against gram-positive and gram-negative bacteria Synergistic with other preservatives Effective over broad pH range: 3 - 9
Germall Plus preservative	Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate	<ul style="list-style-type: none"> Broad-spectrum antimicrobial activity Effective over broad pH range: 3 - 8
Liquid Germall Plus preservative	Propylene Glycol (and) Diazolidinyl Urea (and) Iodopropynyl Butylcarbamate	<ul style="list-style-type: none"> Broad-spectrum antimicrobial activity Effective over broad pH range: 3 - 8
LiquaGard™ preservative	Butylene Glycol and Iodopropynyl Butylcarbamate	<ul style="list-style-type: none"> Effective fungicide Works over a wide pH range: 4 - 9 Temperature stable Compatible with broad range of raw materials including surfactants and proteins Available only in NA
LiquaPar ME preservative	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Caprylyl Glycol	<ul style="list-style-type: none"> Provides similar efficiency to traditional paraben combinations Effective over broad pH range: 3.0 - 7.5 Not available in NA Global use †
LiquaPar Oil preservative	Isopropylparaben (and) Isobutylparaben (and) Butylparaben	<ul style="list-style-type: none"> Effective against gram-positive bacteria, yeast and mold Solvent free Effective over broad pH range: 3.0 - 7.5 Global use †
LiquaPar Optima preservative	Phenoxyethanol (and) Methylparaben (and) Isopropylparaben (and) Isobutylparaben (and) Butylparaben	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective over broad pH range: 3.0 - 7.5 Global use †
LiquaPar PE preservative	Phenoxyethanol (and) Isopropylparaben (and) Isobutylparaben (and) Butylparaben	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective over broad pH range: 3.0 - 7.5 Global use †
LiquaPar MEP / Rokonsal MEP preservatives	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylparaben	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective over broad pH range: 3.0 - 7.5 Global use †
LiquaPar PN / Rokonsal PB-4 preservatives	Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylparaben (and) Butylparaben	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective over broad pH range: 3.0 - 7.5 Global use †
Optiphen MIT preservative	Aqua (Water) (and) Methylisothiazolinone	<ul style="list-style-type: none"> Effective against gram-positive and gram-negative bacteria Effective between pH 2 and 10 Global use †
Optiphen MIT Plus preservative	Aqua (Water) (and) Methylisothiazolinone (and) Phenethyl Alcohol (and) PPG-2-Methyl Ether	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective between pH 2 and 10 Global use †
Optiphen MIT Ultra preservative	Aqua (Water) (and) Methylisothiazolinone (and) Phenylpropanol (and) Propylene Glycol	<ul style="list-style-type: none"> Broad-spectrum activity against bacteria, yeast and mold Effective between pH 2 and 10 Global use †

† For Country-specific details, please contact your technical service representative.

Trade Name	INCI Name	Features and Benefits
Rokonsal J preservative	Phenoxyethanol (and) Iodopropynyl Butylcarbamate	<ul style="list-style-type: none"> • Effective fungicide • Works over wide pH range: 4 - 9 • Temperature stable • Compatible with broad range of raw materials including surfactants and proteins • Not available in NA
Rokonsal KS-4 preservative	Propylene Glycol (and) Benzyl Alcohol (and) Methylchloroisothiazolinone (and) Methylisothiazolinone	<ul style="list-style-type: none"> • Broad-spectrum activity against bacteria, yeast and mold • Fast-acting • Effective up to pH 8 max. • Not available in NA • Global use †
Rokonsal LJ-1 preservative	Benzyl Alcohol (and) 2-Bromo-2-Nitropropane-1,3-Diol (and) Iodopropynyl Butylcarbamate (and) Deceth-8 (and) PPG-2 Methyl Ether	<ul style="list-style-type: none"> • Broad-spectrum activity against bacteria, with enhanced performance against fungi and yeast • Fast-acting • Effective up to pH 7 max. • Not available in NA • Global use †
Rokonsal S-1 / LiquaGard S-1 preservative	Methylchloroisothiazolinone (and) Methylisothiazolinone	<ul style="list-style-type: none"> • Broad-spectrum of activity, fast-acting at low use-levels
Rokonsal SE-2 preservative	2-Bromo-2-Nitropropane-1,3-Diol (and) Ethylparaben (and) Cetrimonium Bromide (and) PPG-2 Methyl Ether	<ul style="list-style-type: none"> • Broad-spectrum activity against bacteria, fungi and yeast • Fast-acting • Effective up to pH 7 max. • Not available in NA
Suttocide™ A preservative	Sodium Hydroxymethylglycinate	<ul style="list-style-type: none"> • Broad-spectrum preservation • Fast-acting • Effective pH: 3.5 - 12.0

† For Country-specific details, please contact your technical service representative.

Preservative boosters

Diols can influence overall microbial stability due to their water binding properties. They are widely used in skin care, hair care, wet wipes, toiletries and color cosmetics. Lending moisturizing and solubilizing properties, they are considered to be multifunctional. With a neutral smell and wide pH tolerance, diols are suitable for many applications. In emulsions, diols should be added at the post-emulsification stage to enhance their availability at the water/oil interface.

Trade Name	INCI Name	Features and Benefits
Optiphen OD preservative booster	Caprylyl Glycol	<ul style="list-style-type: none"> • Moisturizing agent • Solvent for active ingredients • Humectant • Preservative booster • Wide pH range 2 - 10
Optiphen HD preservative booster	1,2-Hexanediol	

Rheology Modifiers

Benecel™ hydroxypropyl methylcellulose

A nonionic, cold water-soluble polymer, Benecel hydroxypropyl methylcellulose (HPMC) is a good film-former and is compatible with most surfactant systems. In personal care applications, HPMC is chosen for its foam enhancing properties in surfactant systems. When used in a shampoo or body wash, the HPMC polymer helps with formation of bubble structure, leading to richer, longer lasting lather.

Trade Name	INCI Name	Features and Benefits
Benecel E4M, E10M, K100M, K200M HPMC	Hydroxypropyl Methylcellulose	<ul style="list-style-type: none">• Enhances and stabilizes foam• Effective thickening where salts are ineffective• Ability to create clear formulations• E10M is soluble in hydroalcoholic systems

Ashland™ carbomers

Ashland carbomers are cross-linked polyacrylic polymers of high molecular weight. They are anionic in nature and acidic in their unneutralized state and have to be neutralized with an appropriate base to achieve their thickening ability. Ashland carbomers are extremely efficient thickeners and powerful stabilizers at low concentrations in water and aqueous ethanol. They can be used in hand sanitizers, lotions and gels.

Trade Name	INCI Name	Features and Benefits
Ashland 940 carbomer	Carbomer	<ul style="list-style-type: none">• High molecular weight provides efficient thickening• High yield value provides excellent suspension• Creates crystal clear formulations
Ashland 980 carbomer	Carbomer	<ul style="list-style-type: none">• High molecular weight provides efficient thickening• High yield value provides excellent suspension• Creates crystal clear formulations• Benzene free
Ashland 941 carbomer	Carbomer	<ul style="list-style-type: none">• Medium molecular weight provides efficient thickening• High yield value provides excellent suspension even at low viscosity• Creates crystal clear formulations• Improved salt tolerance
Ashland 981 carbomer	Carbomer	<ul style="list-style-type: none">• Medium molecular weight provides efficient thickening• High yield value provides excellent suspension even at low viscosity• Creates crystal clear formulations• Improved salt tolerance• Benzene free

FlexiThix™ polymer

FlexiThix polymer is a patented thickener that works under extreme conditions. Capable of providing stability across a wide pH range, this innovative polymer is highly salt tolerant, provides a pleasant after-feel and requires no neutralization. Having pH- and viscosity-stability for at least 12 weeks in materials such as glycolic acid and salicylic acid, FlexiThix polymer is highly compatible in a number of systems and has little to no odor.

Trade Name	INCI Name	Features and Benefits
FlexiThix polymer	PVP	<ul style="list-style-type: none">• High electrolyte tolerance• Thickens extreme pH systems (e.g., guanidine carbonate, calcium hydroxide, sodium hydroxide, thioglycolates)• Builds viscosity across a wide pH range• Thickens water-, alcohol- and oil-based formulations• Broad formulation flexibility• No neutralization required• Pleasant after-feel• Little to no odor

Klucel™ hydroxypropylcellulose

Klucel hydroxypropylcellulose (HPC), a nonionic polymer, is often used where advantage can be taken of its unique solubility in water, alcohol, or anhydrous systems. Klucel HPC is an excellent film-forming polymer which yields flexible, clear, thermoplastic, non-tacky films. Klucel HPC can be used to thicken aqueous and polar organic systems. Aqueous solutions of Klucel HPC are water-white and are of high clarity. High molecular weight grades, known as high viscosity types, are effective thickeners and film formers, while lower molecular weight grades are often employed for their excellent film-forming properties.

Trade Name	INCI Name	Features and Benefits
Klucel HPC	Hydroxypropylcellulose	<ul style="list-style-type: none">• Soluble in a broad range of solvents• Natural feeling film formation• Salt tolerance• Ability to create clear formulations• Pharmaceutical grade acceptable for use in personal lubricants

Natrosol™ hydroxyethylcellulose

Commonly used in a wide variety of applications in personal care, Natrosol 250 hydroxyethylcellulose (HEC) is a nonionic, water-soluble polymer derived from cellulose. Natrosol HEC is easily dissolved in cold or hot water to give crystal clear solutions of varying viscosities. Solutions of Natrosol HEC are pseudoplastic or shear-thinning. As a result, personal care products formulated with Natrosol HEC dispense rich and thick from the container, but spread easily on hair and skin.

Trade Name	INCI Name	Features and Benefits
Natrosol 250 R PC hydroxyethylcellulose	Hydroxyethylcellulose	<ul style="list-style-type: none">• Excellent salt tolerance• Imparts slip and lubricity• Ability to create clear formulations• Wide range of viscosities• Surface treated to aid incorporation into water
Natrosol 250 R CS hydroxyethylcellulose	Hydroxyethylcellulose	<ul style="list-style-type: none">• Additional purification to reduce ash content• Excellent salt tolerance• Imparts slip and lubricity• Ability to create clear formulations• Wide range of viscosities• Surface treated to aid incorporation into water
Natrosol 250 BR hydroxyethylcellulose	Hydroxyethylcellulose	<ul style="list-style-type: none">• Biostable grade to improve tolerance to enzymes• Slightly wider pH stability• Range of viscosities• Excellent salt tolerance• Imparts slip and lubricity• Ability to create clear formulations
Natrosol 250 Pharm hydroxyethylcellulose	Hydroxyethylcellulose	<ul style="list-style-type: none">• Highest purity grade• Excellent salt tolerance• Imparts slip and lubricity• Ability to create clear formulations• Wide range of viscosities• Pharmaceutical grade acceptable for use in personal lubricants

Natrosol™ Plus and PolySurf™ 67 cetyl hydroxyethylcellulose

Natrosol Plus and PolySurf 67 cetyl hydroxyethylcellulose (HMHEC) are unique in that they function as associative thickeners, meaning they not only thicken aqueous systems via chain entanglement and conventional hydrogen bonding, but also via hydrophobe interactions. In addition to associative thickening of aqueous systems, HMHEC is chosen for its shear-thinning behavior and broad pH stability, providing an elegant and non-tacky feel to both skin and hair care products.

Trade Name	INCI Name	Features and Benefits
Natrosol Plus 330 CS and PolySurf 67 HMHEC	Cetyl Hydroxyethylcellulose	<ul style="list-style-type: none">• Imparts slip and lubricity• Pseudoplastic behavior• Salt tolerance• Thickening of glucoside surfactants• Stable over broad (3.5 - 11.0) pH range• Coemulsification properties help to stabilize emulsion systems• Helps to stabilize and thicken emulsion systems

N-Hance™ hydroxypropyl guar

N-Hance hydroxypropyl (HP) guar is a nonionic polymeric thickener and film-former. This modified guar provides unique skin feel after washing from both body wash and liquid hand soap formulations. It is used to stabilize and thicken a formulation while also stabilizing the foam that is generated. Due to its nonionic nature, it is compatible with anionic, cationic and nonionic ingredients.

Trade Name	INCI Name	Features and Benefits
N-Hance HP40 and HP40S guar	Hydroxypropyl Guar	<ul style="list-style-type: none">• Enhances both wet and dry skin after-feel• Stabilizes lather• Imparts creamier, more dense foam• HP40S is self hydrating

PrimaFlo™ MP3295A fluidized suspension polymer solution

PrimaFlo MP3295A suspension polymer (FPS) is a liquid thickener and foam stabilizer, based on hydroxypropyl methylcellulose suspended in an aqueous solution. This fluid suspension product has been developed specifically for use in personal care formulations and is fully compatible with virtually all surfactant systems.

Trade Name	INCI Name	Features and Benefits
PrimaFlo MP3295A FPS polymer solution	Hydroxypropyl Methylcellulose	<ul style="list-style-type: none">• Enhances and stabilizes foam• Effective thickening where salts are ineffective• Ability to create clear formulations• Can be post-added to adjust viscosity• Ability to reduce production time

RapiThix™ polymers

RapiThix polymers are rheology modifiers especially designed for use in cold mix processes. These products are easy-to-use, shear tolerant, shear-thinning and effective at low use levels. The performance characteristics and benefits of the polymers allow formulators to develop a range of efficacious and appealing personal care products.

Trade Name	INCI Name	Features and Benefits
RapiThix A-60 polymer	Sodium Polyacrylate (and) Hydrogenated Polydecene (and) Trideceth-6	<ul style="list-style-type: none">• Easy-to-use emollient-based dispersion• Provides soft, smooth feel• Can be post-added to adjust viscosity after emulsion forms and cools
RapiThix A-100 polymer	Sodium Polyacrylate	<ul style="list-style-type: none">• Fully active white powder offering greater formulation flexibility• Provides soft, smooth feel• No pre-set oil phase• Makes oil-free systems possible• High-solids content for higher efficiency• Helps stabilize emulsion systems

Stabileze™ QM polymer

Stabileze QM polymer is both a performance-enhancing and cost-effective rheology modifier. Based on methylvinylether/maleic anhydride chemistry, this ingredient delivers exceptional thickening, suspending and stabilizing capability in aqueous and nonaqueous systems, even at low use levels or low pH.

Stabileze QM polymer disperses easily in water and forms clear, aqueous gels at low use levels. Its shear-thinning properties allow strong gels with quick break for processing, spreading and dispensing. It is compatible with a wide range of ingredients including polyquaterniums; however, it has limited compatibility with salts and some anionic surfactants.

Trade Name	INCI Name	Features and Benefits
Stabileze QM polymer	PVM/MA Decadiene Crosspolymer	<ul style="list-style-type: none">• Excellent thickening/gelation• Excellent control of product rheology• Shear-thinning• Formulates into clear products• Effective over wide pH range (3 - 11)• Imparts exceptional skin feel• High yield value• Helps stabilize emulsion systems

UltraThix™ P-100 polymer

UltraThix P-100 polymer is a multi-benefit, patented rheology modifier that delivers an array of benefits, such as shear-thinning rheological properties with yield value and positive sensory perception. At use level (less than 0.6%), research shows that this lightly cross-linked copolymer of vinyl pyrrolidone (VP) and acrylic acid (AA) offers emulsion stabilization, reduces tack and improves aesthetics of hydroalcoholic sprays, and enhances skin feel properties.

Trade Name	INCI Name	Features and Benefits
UltraThix P-100 polymer	Acrylic Acid/VP Crosspolymer	<ul style="list-style-type: none">• Water-resistant formulations• Reduces greasy feel of high oil phase emulsions• Dry film on skin is smooth• Shear-thinning with short playtime• Emulsion stabilizer• Compatible with metal oxides• Suspension aid• Reduces tack

Solvents

X-Tend™ 226 ester

X-Tend 226 ester provides a high solvency capacity for solid organic sunscreen materials such as Escalol™ S UV filter (bemotrizinol), Escalol 567 UV filter (oxybenzone) and Escalol 517 UV filter (avobenzone). In addition, it increases the critical wavelength and the UVA/UVB ratio of some formulations. Ideal for sunscreens and daily wear products, this light ester offers excellent skin feel and can counteract the oily feel of some UV filters to improve the overall aesthetics of skin care and sun care formulas.

Trade Name	INCI Name	Features and Benefits
X-Tend 226 ester	Phenethyl Benzoate	<ul style="list-style-type: none">• Effectively dissolves solid organic sunscreens such as Escalol™ S UV filter (bemotrizinol), Escalol 567 UV filter (oxybenzone) and Escalol 517 UV filter (avobenzone)• Increases critical wavelength and UVA/UVB ratio of some formulations• Excellent skin feel



UV Filters

Escalol™ UV filters

The Escalol UV filters offer protection against UVB and/or UVA radiation. These UV filters can be used in sunscreens, body and facial care formulas and color cosmetics to deliver SPF protection. The Escalol UV filter range is approved in most countries.

Trade Name	INCI Name (USAN Name)	Features and Benefits
Escalol HMS UV filter	Homosalate (Homosalate)	<ul style="list-style-type: none"> Oil soluble Secondary UVB absorber Approved use level: up to 10% (E.U., Japan), up to 15% (U.S., Australia)
Escalol S UV filter	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (Bemotrizinol)	<ul style="list-style-type: none"> Broad-spectrum UVB/UVA absorption Synergistic with other UV filters to offer higher SPF ratings for UVB radiation and photostability for longer-lasting UVA protection Approved for use in most countries (except U.S.; pending approval) at levels up to 10.0%
Escalol 507 UV filter	Ethylhexyl Dimethyl PABA (Padimate O)	<ul style="list-style-type: none"> Powerful oil-soluble UVB absorber Provides cost-effective performance Excellent safety profile Typical use level in combination with other sunscreen actives: 2.0 - 8.0% Approved use level: up to 8.0% (E.U.); up to 8.0% (U.S.); up to 3.0% (Japan)
Escalol 517 UV filter	Butyl Methoxydibenzoylmethane (Avobenzone)	<ul style="list-style-type: none"> Strong absorber of radiation in the longer wavelengths of the UVA (UVA-I 340 - 400 nm) not covered effectively by other UV absorbers Protects against photo damage and premature aging of the skin caused by exposure to UVA light Approved use level: up to 5.0% (E.U.); up to 3.0% (U.S.)
Escalol 557 UV filter	Ethylhexyl Methoxycinnamate (Octinoxate)	<ul style="list-style-type: none"> Broad UVB absorbency profile Typical use level in combination with other sunscreen actives: 2.0 - 7.5% Approved use level: up to 10.0% (E.U.); up to 7.5% (U.S.)
Escalol 567 UV filter	Benzophenone-3 (Oxybenzone)	<ul style="list-style-type: none"> Secondary UVB absorber with activity in the UVA region Provides supplemental UV protection and boosts SPF activity Typical use level in combination with other sunscreen actives: 2.0 - 6.0% Approved use level: up to 10.0% (E.U.); up to 6.0% (U.S.)
Escalol 577 UV filter	Benzophenone-4 (Sulisobenzene)	<ul style="list-style-type: none"> Secondary UVB absorber with activity in the UVA region Relatively water-soluble Recommended at low levels (<0.5%) as a color protectant for products in clear packages Approved use level: up to 5.0% (E.U.); up to 10.0% (U.S.)
Escalol 587 UV filter	Ethylhexyl Salicylate (Octisalate)	<ul style="list-style-type: none"> Secondary UVB absorber used in high-SPF formulas Excellent solvent and coupler for other sunscreen actives Typical use level in combination with other sunscreen actives: 3.0 - 5.0% Approved use level: up to 5.0% (E.U.); up to 5.0% (U.S.)
Escalol 597 UV filter	Octocrylene (Octocrylene)	<ul style="list-style-type: none"> UVB absorber for high-SPF formulas Believed to enhance performance of water-resistant formulas Typical use level in combination with other sunscreen actives: 7.0 - 10.0% Approved use level: up to 10.0% (E.U.); up to 10.0%

Water-resistant Agents

Ashland offers a variety of film-formers that provide effective water and wear resistance properties. Manufacturers can differentiate their products by incorporating highly functional yet consumer friendly water-resistant agents, especially in growth areas like anhydrous sunscreens.

Advantage™ Plus polymer

Advantage Plus polymer is a self-adapting polymer which helps boost formula SPF and improves water-resistance, while providing a low-shine finish on the skin. This polymer is a perfect choice for anhydrous spray formulations since it delivers enhanced performance and feel. Study results show that Advantage Plus polymer boosts initial SPF and improves water-resistant benefits for higher SPF retention.

Trade Name	INCI Name	Features and Benefits
Advantage Plus polymer	VA/Butyl Maleate/Isobornyl Acrylate Copolymer	<ul style="list-style-type: none">• Helps boost formula SPF• Increases water-resistance• Self-adapting polymer technology• Delivers a low-shine finish on skin

Allianz™ OPT polymer

Allianz OPT polymer is designed to deliver water resistance and wear resistance to skin care and sun care formulations, including color cosmetics. Allianz OPT polymer is ideal for use in low viscosity (sprayable) oil-in-water (O/W) emulsions, nonionic emulsification systems and when cold processes are required. Allianz OPT polymer can also be used as a water-resistant agent for water-in-silicone (W/S) or water-in-oil (W/O) systems.

Trade Name	INCI Name	Features and Benefits
Allianz OPT polymer	Acrylates/C12-22 Alkylmethacrylate Copolymer	<ul style="list-style-type: none">• Water-resistant agent for W/S, W/O and O/W systems which allows formulation of low viscosity sprayable lotions• Unique network structure prevents re-wetting of nonionic ethoxylated emulsions• Cold processable• Creates very water-resistant, emulsion-based lip care preparations with smooth, non-tacky feel

Antaron™ (Ganex™) polymers

Antaron (Ganex) polymers are excellent film-formers and provide water and wear resistance and moisture barrier properties. Differing hydrophobic/hydrophilic characteristics of the series provide a wide range of solubility and functionality. All are excellent pigment dispersants and suspending agents. All are substantive to skin. Antaron polymers are sold under the Ganex trade name in the USA.

Trade Name	INCI Name	Features and Benefits
Antaron (Ganex) V-216 polymer	VP/Hexadecene Copolymer	<ul style="list-style-type: none">• Hydrophobic• Provides water-resistance• Pigment dispersant• Moisture barrier properties
Antaron (Ganex) V-220/220F polymers	VP/Eicosene Copolymer	<ul style="list-style-type: none">• Hydrophobic• Provides water-resistance• Improves stick integrity• Excellent film-formation• Provides body to emulsion
Antaron (Ganex) WP-660 polymer	Triacantanlyl PVP	<ul style="list-style-type: none">• Hydrophobic• Excellent water- and wear-resistance• Excellent film-formation



The Ashland Skin Care Application Chart

The Ashland Skin Care Application Chart

Ashland supports a range of formulating approaches to enhance the feel, performance and functionality of products. For your convenience, this guide outlines those options by market application, including: antiperspirants/deodorants, body care, color cosmetics, facial care, intimate care, rinse-off and sun care.

Category	Page	Antiperspirants & Deodorants (Ceraphyl™ esters, Natrasol™ HEC, X-Tend™ ester and Anatron™ (Ganex™) polymers)	Body Care (Ceraphyl™ esters, Cerasynt™ esters, Captivates™, Lubrajel* hydrogels, Lubrasil* microemulsions, Optiphen™ preservatives, Conarom™ aromatic, Germaben™ preservatives, Germall™ preservatives, LiquaPar™ preservatives, Rokonsal™ preservatives, Ashland™ carbomers, Natrosol™ HEC, Escalol™ UV filters, Antaron™ (Ganex™) polymers, Allianz™ polymer, Advantage™ polymer, N-Hance™ guar, Natriance™ extracts, UltraThix™ polymer, FlexiThix™ polymer, RapiThix™ polymer, Stabileze™ polymer and Vincience™ biofunctionals)	Color Cosmetics (Ceraphyl™ esters, Lubrajel* hydrogels, Lubrasil* microemulsions, Optiphen™ preservatives, LiquaGard™ preservatives, LiquaPar™ preservatives, Conarom™ aromatics, Germaben™ preservatives, Suttocide™ A preservative, Germall™ preservatives, Rokonsal™ preservative, Suttocide™ preservative, Klucel™ HPC, Natrosol™ Plus CS, Polysurf™ 67 HMHEC, Escalol™ UV filters, Advantage™ Plus polymer, Allianz™ polymers, Antaron™ (Ganex™) polymers, RapiThix™ polymer, FlexiThix™ polymer, RapiThix™ polymer, Stabileze™ polymer and Vincience™ biofunctionals)			
				Lipsticks	Powders (Pressed/ Loose)	Liquid Make-up	Mascaras
Vincience™ Biofunctionals	6 - 8		●	●	●	●	
Conditioning Polymers	10 - 11						
Emollients	11 - 13	●	●	●	●	●	●
Emulsifiers	13		●			●	●
Natriance™ Essential Skin Extracts	13 - 14		●		●	●	
Film-Formers	14	●		●		●	●
Lipid Lamellar Gel Systems	16		●				
Liquid Crystals	16 - 17						
Microencapsulation	17 - 18		●				
Moisturizers	19 - 20	●	●	●		●	●
Preservatives	20 - 22		●	●	●	●	●
Rheology Modifiers	24 - 27	●	●	●		●	●
Solvents	27	●	●				
UV Filters	29		●	●	●	●	
Water-resistant Agents	30	●	●	●	●	●	●

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