

BASF
We create chemistry

Better Together:

Mineral Sunscreen Solutions



Develop next generation sun care products with a full portfolio at your fingertips.

Cosmetic formulators work diligently to create sunscreens that offer both excellent efficacy and aesthetics. Developing SPF products that offer high levels of protection and have consumers excited to wear them daily is no easy task, which is why BASF has a broad offering of chemistries which work well in sunscreen formulas. Our team of expert formulators has explored countless combinations of UV filters, chassis ingredients, and cosmetic actives to find the best balance between effective protection and a pleasant sensorial experience. Because ingredients that work “Better Together” enable unique and effective product development for sunscreens. Explore our solutions for mineral sunscreen development.

Table of Contents

Zinc Oxide UV Filters 4

Z-COTE® 4
Z-COTE® HP1 4
Z-COTE® HP1X 4
Z-COTE® LSA 4
Z-COTE® LSA UC 4
Z-COTE® Simple 4
Z-COTE® Sheer 4

Emollients for uncoated ZnO (high polarity oils) 4

Cegesoft® SBE 4
Cegesoft® SH 4
Cetiol® B 4
Cetiol® SB 45 TR 4

Emollients for coated ZnO (med-low polarity oils) 5

Cetiol® C5 5
Cetiol® CC 5
Cetiol® LC 5
Cetiol® OE 5
Cetiol® Sensoft 5
Cetiol® SoftFeel 5
Cetiol® Ultimate 5
Luvitol® Lite EM 5
Myritol® 331 5

W/O Emulsifiers 5

Dehymuls® PGPH 5
Lameform® TGI 5

O/W Emulsifiers 6

Cremophor® GS 32 6
Emulgade® Verde 10MS 6
Eumulgin® B 1 6
Eumulgin® B 2 6
Eumulgin® B 25 (NA) 6

Water Soluble Rheology Modifiers 6

Verdessence™ Alginate 6
Verdessence™ Tara 6
Verdessence™ Xanthan 6

Oil Soluble Rheology Modifiers 7

Cosmedia® DC 7
Cosmedia® Gel CC 7

Film Formers 7

Cosmedia® DC 7
Cosmedia® Gel CC 7

Sensory Enhancers 7

Cosmedia® Gel CC 7
Verdessence™ RiceTouch 7

Bioactives 7

Hydagen® Aquaporin 7
Hydrasensyl® Glucan Green 7

Auxiliaries 7

Bisabolol rac. 7
D-Panthenol 75W 7
Vitamin E Acetate Care 7

Zinc Oxide UV Filters

Trade Name	INCI	Description
Z-COTE®	Zinc Oxide	A hydrophobic, inorganic UV protection agent best used in beach wear applications.
Z-COTE® HP1	Zinc Oxide (and) Triethoxycaprylylsilane	A hydrophobic, inorganic UV protection agent used in low-whitening cosmetic sunscreen formulations. It can be dispersed in an agent of choice, allowing for more flexibility in the oil phase.
Z-COTE® HP1 X	Zinc Oxide (and) Triethoxycaprylylsilane	A low-whitening, hydrophobic inorganic UV protection agent used in cosmetic sunscreen formulations to create pleasant aesthetics. It is less dense than Z-COTE HP1.
Z-COTE® LSA	Zinc Oxide (and) Triethoxycaprylylsilane	An inorganic, broad-spectrum sunscreen filter with excellent photostability. Its gentle formulations are ideal for daily wear applications. Less energy is required for dispersions due to its larger particle size.
Z-COTE® LSA UC	Zinc Oxide	A natural, broad-spectrum sunscreen that enables gentle formulations suitable for sensitive skin and baby products. Less energy is required for dispersions due to its larger particle size.
Z-COTE® Simple	Zinc Oxide Zinc Oxide (and) Caprylic/Capric Triglyceride (and) Polyhydroxystearic Acid (and) Triethoxycaprylylsilane	An inorganic, broad-spectrum Zinc Oxide dispersion with excellent photostability. Its physical characteristics support mild formulations and it is applicable to baby care. Convenient, quick, and easy to use without specialized equipment.
Z-COTE® Sheer	Zinc Oxide (and) Coco-Caprylate/ Caprate (and) Polyglyceryl-2 Dipolyhydroxystearate (and) Lecithin	A naturally derived liquid dispersion of Zinc Oxide. This highly effective, inorganic, broad-spectrum UV filter has excellent photostability and allows for the creation of lightweight formulas that protect the skin. Z-COTE Sheer offers a low-whitening effect, so it's applicable for a wide range of sun and skin care applications, including daily wear products for all skin tones. With its ease of use and high compatibility, Z-COTE® Sheer offers excellent flexibility for formulators and works in harmony with other natural ingredients.

Emollients for uncoated ZnO (high polarity oils)

Trade Name	INCI	Description
Cegesoft® SBE	Butyrospermum Parkii (Shea) Butter	A highly concentrated form of Shea butter where the unsaponifiable matter consisting of valuable tocopherols and cinnamic acid esters from triterpene alcohol is highly concentrated, resulting in considerably higher active levels. It is a waxy emollient suitable for a variety of skin care applications.
Cegesoft® SH	Shorea Stenoptera Seed Butter	An exotic, waxy emollient with a melting temperature near to skin temperature. Due to its consistency-giving properties it improves the body of all skincare formulations. It leaves a silky, non-lubricating velvety feeling on skin, and improves wet and dry combability of hair when used in shampoos.
Cetiol® B	Dibutyl Adipate	A fast-spreading emollient especially suitable for sun care formulations due to excellent solubilizing capacities for crystalline UV-filters. It is a clear, colorless, odorless and polar oil with a low molecular weight.
Cegesoft® SB 45 TR	Butyrospermum Parkii (Shea) Butter	A special lipid fraction of the natural Shea butter directly sourced from women´s groups program* and characterized by a higher melting range. It helps to provide a soft and smooth skin feel. *Kolo Nafaso program.
Myritol® 331	Coco-Glycerides	A coconut-based emollient that is medium spreading with very good emulsifiability. It is particularly suited for sun care formulations due to its solubilizing capacity for crystalline UV filters and dispersing properties for pigments.

Emollients for coated ZnO (med-low polarity oils)

Trade Name	INCI	Description
Cetiol® C5	Coco-Caprylate	A naturally based light emollient for skin care applications. It is approved by natural certifications around the world. It is a fast-spreading emollient with a pleasant, dry skin feel. Cetiol® C5 is particularly designed to offer a good alternative to volatile silicones like cyclomethicones. It works well in face and body care applications, as well as wipes, hair care and sun care.
Cetiol® CC	Dicaprylyl Carbonate	An innovative, fast-spreading, dry emollient that can significantly improve the sensory performance of the final formulation. Its ability to dissolve crystalline UV filters and to disperse pigments makes it particularly suitable for sun care products. Cetiol® CC is also suitable for use in aerosols, as it effectively dissolves perfume and propellants, with applications specifically including body care, face care, antiperspirants/deodorants, baby care and sun care.
Cetiol® LC	Coco-Caprylate / Caprate	A traditional, medium spreading emollient for modern cosmetic applications, and is a clear, mildly yellowish, medium polar oil, with a mean molecular weight, a slightly fatty odor.
Cetiol® OE	Dicaprylyl Ether	A fast-spreading emollient that gives the skin a light, silky feel, and is ideal for innovative green formulations without silicones. It has excellent hydrolytic stability, making it suitable for stable emulsions, and a low solubility in water that improves its stability of fine emulsions.
Cetiol® Sensoft	Propylheptyl Caprylate	A fast-spreading emollient with a multi-dimensional softness sensation for all cosmetic applications. It is suitable for decorative cosmetics, as well as sun care formulations due to its outstanding solubilizing capacities for crystalline UV filters, pigment dispersing properties, and for face/body care applications.
Cetiol® SoftFeel	C12-18 Alkanoyl Glycerin/Sebacic Acid Copolymer	A soft-solid emollient made from 100% renewable ingredients and is 100% naturally-derived according to ISO 16128*. The versatile ingredient helps to moisturize and leave a soft feeling on the skin. It can also act as a clean alternative to petroleum-based petrolatum as the ingredients have very similar sensory and occlusivity properties. Cetiol SoftFeel is applicable in a variety of beauty and personal care applications.
Cetiol® Ultimate	Undecane (and) Tridecane	The ultimate sensory solution for volatile silicone alternatives. This 100% naturally-derived, ultrafast-spreading emollient has a wide range of applications spanning from ultra-thin oil-in-water formulations to transparent sun protection formulations or smooth dry body oils. Thanks to its volatile properties, Cetiol® Ultimate makes products easy to apply, absorb quickly and leaves a smooth, dry feeling. It has performance benefits in color cosmetics and sun care, e.g: excellent pigment wetting properties, improved coverage and powdery sensation, and no crystallization of UV filters in clear sun care systems compare to cyclomethicone.
Luvitol® Lite EM	Hydrogenated Polyisobutene	A cosmetic oil that can be used in all kinds of cosmetic applications.

W/O Emulsifiers

Trade Name	INCI	Description
Dehymuls® PGPH	Polyglyceryl-2 Dipolyhydroxystearate	An emulsifier used for the preparation of low viscous water-in-oil emulsions. It is flexible in use with ethanol and emollients as well as independent of emollients, and is cold-processable.
Lameform® TGI	Polyglyceryl-3 Diisostearate	An emulsifier used in the production of cosmetic emulsions, lipophilic sticks, and ointments. It is a clear, yellowish liquid which turns cloudy at room temperature. This product is used as a water-in-oil emulsifier for cold manufacture, and the cloudiness appearance is reversible by heating.

*Natural origin % = Number of natural carbon atoms / Total number of carbon atoms (natural and non-natural) x 100 (ISO Norm 16128-2)

O/W Emulsifiers

Trade Name	INCI	Description
Cremophor® GS 32	Polyglyceryl-3 Distearate	A nonionic emulsifier suitable for emulsions with high concentrations of natural oils and UV filters and is an alternative to EO or sulfate-based emulsifiers. It can be used in face and body creams for dry and greasy skin, as well as in sun protection preparations.
Emulgade® Verde 10MS	Polyglyceryl-10 stearate	A versatile, naturally derived, non-ethoxylated emulsifier works well in O/W applications and creates lamellar structures. It is compatible in many personal applications including skin care, sun care, and hair care. The ingredient is compatible with common thickeners as well as other common cosmetic ingredients. Emulgade Verde 10MS performs very well compared to EO-based emulsifiers. It enables easy distribution on the skin and pleasant sensory in formulations.
Eumulgin® B 1	Ceteareth-12	A universally applicable, non-ionic emulsifier for cosmetic oil-in-water emulsions.
Eumulgin® B 2	Ceteareth-20	A universally applicable, non-ionic emulsifier for cosmetic oil-in-water emulsions.
Eumulgin® B 25 (NA)	Ceteareth-25	A cosmetic grade oil-in-water emulsifier, which is used to produce ointments, creams, liquid emulsions, gels, and other cosmetic formulations. Supplied in the form of free-flowing, non-dusting micro-granules that dissolve in water and alcohol to form either a colloid or a clear solution. Eumulgin® B 25 NA is soluble in vegetable and mineral fats and oils.

Water Soluble Rheology Modifiers

Trade Name	INCI	Description
Verdessence™ Alginate	Algin	An algae-based, natural rheology modifier that also provides an enhanced feel on the skin, making it suitable for skin care formats. Provides good stabilization properties with thickening activated by divalent cations Ca^{2+}.
Verdessence™ Xanthan	Xanthan Gum	Efficiently thickens and stabilizes emulsions and surfactant-based formulations, providing excellent viscosity boosted by electrolytes like NaCl. The vegan-compatible Xanthan Gum is produced from 100% renewable feedstocks, cold-processable, preservative-free and eligible for COSMOS approval.
Verdessence™ Tara	Caesalpinia Spinosa Gum	A 100% plant-based rheology modifier that enables the creation of smooth and shapely textures. It is suitable for verified eco-friendly aqueous and emulsion systems acting as an effective thickener and texture enhancer. It also brings sustainability to the table with non-GMO sourcing, no preservatives, and a readily biodegradable composition.

Oil Soluble Rheology Modifiers

Trade Name	INCI	Description
Cosmedia® DC	Hydrogenated Dimer Dilinoleyl/ Dimethylcarbonate Copolymer	A multifunctional ingredient that provides water resistance in sun care formulations and is a key ingredient in achieving a unique sensorial profile with an initial moisture boost.
Cosmedia® Gel CC	Dicaprylyl Carbonate (and) Stearalkonium Hectorite (and) Propylene Carbonate	An emulsion stabilizer and suspending agent. It is a rheology additive that gives a nice sensorial effect and improves spreadability. It offers improved water resistance in sun care formulations, and boosts product performance.

Film Formers

Trade Name	INCI	Description
Cosmedia® DC	Hydrogenated Dimer Dilinoleyl/ Dimethylcarbonate Copolymer	A multifunctional ingredient that provides water resistance in sun care formulations and is a key ingredient in achieving a unique sensorial profile with an initial moisture boost.
Cosmedia® Gel CC	Dicaprylyl Carbonate (and) Stearalkonium Hectorite (and) Propylene Carbonate	An emulsion stabilizer and suspending agent. It is a rheology additive that gives a nice sensorial effect and improves spreadability. It offers improved water resistance in sun care formulations, and boosts product performance.

Sensory Enhancers

Trade Name	INCI	Description
Cosmedia® Gel CC	Dicaprylyl Carbonate (and) Stearalkonium Hectorite (and) Propylene Carbonate	An emulsion stabilizer and suspending agent. It is a rheology additive that gives a nice sensorial effect and improves spreadability. It offers improved water resistance in sun care formulations, and boosts product performance.
Verdessence™ Hydagen® Aquaporin RiceTouch	Oryza Sativa (Rice) Starch	A 100% plant-based, sensory powder with small particle size providing a powdery, light, and smooth skin-feel, ideal for matte-type cosmetics. It is perfectly suitable for natural and organic cosmetics.

Bioactives

Trade Name	INCI	Description
Hydagen® Aquaporin	Glycerin (and) Glyceryl Glucoside	The active matter of Hydagen® Aquaporin is made of highly concentrated glyceryl glucoside. Clinical studies show that Hydagen® Aquaporin boosts the moisturizing capacity of glycerin, for an instant and 24-hour long hydration. It helps to offer protection against digital light effect on skin hydration.
Hydrasensyl® Glucan Green	Water (and) Beta-Glucan	It merges the beneficial properties of hyaluronic acid and collagen. The 3D structure makes Hydrasensyl® Glucan highly stable and insensitive towards harsh formulation conditions. Besides its clinically demonstrated skin smoothing and hydrating properties, it helps to reduce the appearance of redness.

Auxiliaries

Trade Name	INCI	Description
Bisabolol rac.	Bisabolol	A cosmetic active ingredient reported to have various functions, such as protecting the skin from the effects of daily stress. Especially suitable for sensitive skin, baby care, after-shave, and after-sun applications.
D-Panthenol 75W	Panthenol	A cosmetic active ingredient that improves the appearance of skin, hair, and nails. It is ideal for deeply penetrating moisturizers.
Vitamin E Acetate Care	Tocopherol Acetate	A cosmetic active ingredient for use in cosmetic products for the skin and hair. It is an effective moisturizing agent and improves the elasticity appearance and smoothness of the skin. It is used in cosmetic emulsions, such as sunscreens, body lotions, hand creams, body creams, day and night facial creams, and multi-vitamin creams.

We create chemistry

About the Care Chemicals division at BASF

The BASF division Care Chemicals offers a broad range of ingredients for personal care, home care, industrial & institutional cleaning, and technical applications. We are a leading global supplier for the cosmetics industry as well as the detergent and cleaner industry, and support our customers with innovative and sustainable products, solutions and concepts. The division's high-performance product portfolio includes surfactants, emulsifiers, polymers, emollients, chelating agents, cosmetic active ingredients, and UV filters. We have production and development sites in all regions and are expanding our presence in emerging markets. Further information is available online at **care360.basf.com**

North America
100 Park Avenue
Florham Park, NJ 07932
US
Phone: +1-800-962-7831
beautycare-na@basf.com



Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. THERE ARE NO WARRANTIES OF ANY KIND. ALL EXPRESS AND IMPLIED WARRANTIES ARE DISCLAIMED. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required. The claims and supporting data provided in this publication have not been evaluated for compliance with any jurisdiction's regulatory requirements and the results reported may not be generally true under other conditions or in other matrices. Users must evaluate what claims and information are appropriate and comply with a jurisdiction's regulatory requirements. The user of this publication agrees to (i) indemnify and hold harmless each entity of the BASF organization for any and all regulatory action arising from the user's use of any claims or information in this publication, including, but not limited to, use in advertising and finished product label claims, and (ii) not present this publication as evidence of finished product claim substantiation to any regulatory authority.

© 2023 BASF Corporation, Florham Park, NJ. All rights reserved.