



TER Chemicals
DISTRIBUTION GROUP



FORMULATION BROCHURE

SUN PROTECTION & CARE

UV - FILTERS & CARE INGREDIENTS

Simon & Werner located in Flörsheim am Main is a chemical distribution company focusing on specialty chemicals. Founded in the year 1945 the company started with the formulation and filling of textile dyes. Over the years Simon & Werner became one of the leading distributors of colorants for a diversity of applications in the German speaking countries.

Thanks to this competence Simon & Werner managed to exploit many more applications in numerous industries. One of our today's key markets is the Personal Care industry. As a result of a consequent active portfolio management today we are able to offer our customers a comprehensive range of products for many different formulation concepts.

Since 2008, SIMON & WERNER is a subsidiary of TER HELL & CO. GMBH and hence a member of the international TER GROUP, which is headquartered in Hamburg Germany.



Technical Service

Since early 2013 Simon & Werner operates an own newly build Cosmetic Application Laboratory that ...

- supports our customers with individual formulation examples
- helps our customers to overcome individual formulation problems
- provides extended access and flexibility in formulation development and modification
- develops own guide recipes

Our Portfolio

- Raw Materials for Natural Cosmetics
- Active Ingredients
- Base and Co-surfactants
- Butters
- Colorants
- Conditioning Agents
- Effect Pigments
- Emollients
- Emulsifiers
- Encapsulation Systems
- Exfoliants
- Extracts
- Natural & Essential Oils
- Natural Waxes
- Preservatives & Preservative Boosters
- Polyethylene Glycols
- Rheology Modifiers & Texturizers
- UV-Filters

Our Partners

CLARIANT

**OBERHAUSEN
TECHNOLOGY
CENTER**

EARTH OIL
PLANT-BASED

**KOSTER
KEUNEN**

AIOL
Advanced
Nutrition

sonneborn
REFINED PRODUCTS

umicore
materials for a better life

GREEN MOUNTAIN BIOTECH

SACHEM

maycos
ITALIA

NOVORATE

Vantage

WSB
WORLDWIDE SUPPLY BUSINESS



Zano® 10, Zano® M & Xperse®

- Highest levels of UVA & UVB blocking
- Excellent formulation aesthetics
- Photostable in both UVA and UVB
- Safe and natural

Product Overview

Zano® 10 & Zano® 10 Plus

- Designed to offer the highest levels of broad-spectrum UVA/UVB protection and transparency.
- Zano® 10 is pure zinc oxide.
- Zano® 10 Plus is surface treated with triethoxycaprylyl silane.

Zano® M & Zano® M Plus

- Designed to offer the highest levels of UVA protection.
- Zano® M is larger sized pure zinc oxide.
- Zano® M Plus is surface treated with triethoxycaprylyl silane.

Xperse®

- Dispersions of Zano® 10 (Plus) and Zano® M (Plus).

SPF and UVA performance

Zano® 10 (Plus) and Zano® M (Plus) will add up to 1.6 SPF units per weight percentage used as single UV blocker. Zano® 10 will ensure compliance to all world-wide UVA regulations and provides critical wavelength values of at least 373 nm. Zano® M provides enhanced UVA protection by providing critical wavelength values up to 385 nm.



Combining Zano® with other filters

When used as single UV filter, Zano® gives SPF values up to 30+. Zano® can easily be combined with other filters, such as TiO₂ and chemical filters to reach higher SPF values, such as SPF 50+. When doing so with TiO₂, a ratio of Zano® to TiO₂ of at least 2:1 to 3:1 is recommended to ensure broad-spectrum claims.

Regulations and compliance

Zano® 10 and Zano® M are compliant with major pharmacopoeia, including:

- US Pharmacopoeia (USP).
- European Pharmacopoeia (EP).
- Japanese Standard for Quasi-drug Ingredients (JSQI).
- Korean 'Law for Cosmetics'.
- Indian Pharmacopoeia (IP).
- British Pharmacopoeia (BP).

cGMP compliance

Zano® is manufactured in full compliance to ICH-Q7 GMP guidelines.

Product Overview

Powders	Dispersions
Zano® 10: uncoated zinc oxide *	Xperse® 101: 60% Zano® 10 in sesame oil *
Zano® 10 Plus: coated with triethoxycaprylyl silane	Xperse® 102: 60% Zano® 10 in CCT *
Zano® M: uncoated larger zinc oxide *	Xperse® 201: 60% Zano® 10 Plus in CCT
Zano® M Plus: coated with triethoxycaprylyl silane	Xperse® 152: 70% Zano® M in CCT *
	Xperse® 251: 70% Zano® M Plus in CCT
	Xperse® 301: 30% Zano® 10 & 30% TiO ₂ in CCT *
	Xperse® 401: 30% Zano® 10 Plus & 30% TiO ₂ in CCT

* Ecocert certified products

Application fields

The Zano products are very suitable for use in a wide range of personal care and cosmetics products:

- Medium to high SPF sunscreens
- Low to medium SPF daily (skin) care
- Tinted moisturizers and BB/CC creams
- Pressed and loose powders



Product	INCI	Solubility	UV – Protection
Naviguard AB-100	Butyl Methoxydibenzoylmethane	Oil	UVA
Naviguard B-1	Benzophenone-1	Solvents	UVA + UVB
Naviguard B-3	Benzophenone-3	Oil	UVA + UVB
Naviguard B-4	Benzophenone-4	Water	UVA + UVB
Naviguard OC-320	Octocrylene	Oil	UVB
Naviguard OMC-800	Ethylhexyl Methoxycinnamate	Oil	UVB
Naviguard OS-300	Ethylhexyl Salicylate	Oil	UVB

GUIDE RECIPE

Mineral Sun Cream SPF 30 (SCI/1000)

Claim

- Sun Cream based on Zinc Oxide as single UV – Filter
- Broadband UV – spectrum

Phase	Ingredient	INCI	% w/w	Function
A	Deionized water	Water	43.05	
	Carephos® N (BK Giullini)	Sodium Polyphosphate	1.00	Complexing Agent
	Glycerin 99%	Glycerin	3.00	Humectant
	XG FED CS-PC	Xanthan Gum	0.20	Rheology Modifier
	Aristoflex® AVS (Clariant)	Sodium Acryloyldimethyltaurate/ VP Copolymer	0.50	Rheology Modifier
B	Hostaphat® KW 340 D (Clariant)	Triceteareth-4 Phosphate	2.00	Emulsifier
	Lanette® O	Cetearyl Alcohol	3.00	Emulsifier/ Stabilizer
	SonneNatural® H-203 (Sonneborn)	Olus Oil	3.00	Emollient
	Cetiol® OE	Dicaprylyl Ether	2.00	Emollient
	Liponate® GC (Vantage Specialty Chemicals)	Caprylic/Capric Triglyceride	2.00	Emollient
	Lilac® (Sonneborn)	C14-22 Alkane	2.00	Emollient
	Xperse® 201 (Umicore)	Zinc Oxide, Caprylic/Capric Triglyceride, Polyhydroxystearic Acid, Triethoxycaprylylsilane	33.50	UV – Filter
	C	Kostermilk 102 (Koster Keunen)	Aqua, Beeswax, Glycerin, Trideceth-6 Phosphate, Sodium Hydroxide, Phenoxyethanol	2.00
Phenonip™ ME (Clariant)		Phenoxyethanol, Methylparaben, Ethylparaben	1.00	Preservative
SUNCARE 671062G (Fragrance Resources)		Eugenol	0.50	Perfume
D	Citric Acid 10%	Citric Acid	Qs	pH Adjuster

Procedure:

- I. Mix the components of phase A and heat up to 80°C.
- II. Mix the components of phase B and heat up to 80°C.
- III. Add phase B to phase A and homogenize for 5 minutes.
- IV. Cool down to 35°C and add phase C.
- V. Set pH-value with phase D.



RHEOLOGY & TEXTURE

Waxes & Wax Dispersions



Koster Keunen produces specialty formulated waxes for personal care and cosmetic applications. Their exclusive Kester (natural esters) Waxes are ideal for gelling, skin feel, and moisturization. They can customize the wax blend to your equipment, color and temperature requirements. Fruit waxes, natural wax dispersions, water soluble waxes like PEG Beeswax and PEG Carnauba, complete the line of Personal Care and Cosmetic waxes.



Extract of Koster Keunen Wax Collection		
Organic Beeswax	Synthetic Beeswax	Orange Peel Wax
Sunflower Wax	Rose Wax	Kester Wax
Wax Specialties	Wax Beads	...

Koster Milks are sprayable, easy-to-use wax dispersions with a 40% wax content. A brand new patented emulsification technique allows to produce small, spherical wax particles with a uniform particle size. Koster Keunen Milks' extraordinary film forming abilities improve protective and sensory properties of sun, hair and skin care products.

KEY BENEFITS

- Extraordinary film forming abilities
- Film former for sun products, hair care and skin care
- SPF booster
- Water resistance booster

Koster Milk 102 (40% Beeswax)	Koster Milk 202 (40% Sunflower Wax)	Koster Milk 302 (40% Carnauba Wax)
<i>INCI: Aqua, Beeswax, Glycerin, Trideceth-6 Phosphate, Sodium Hydroxide, Phenoxyethanol</i>	<i>INCI: Aqua, Helianthus Annuus Seed Wax, Glycerin, Trideceth-6 Phosphate, Sodium Hydroxide, Phenoxyethanol</i>	<i>INCI: Aqua, Copernicia Cerifera Wax, Glycerin, Trideceth-6 Phosphate, Sodium Hydroxide, Phenoxyethanol</i>

GUIDE RECIPE

Sun Protection Stick SPF 50 (SCIV/1000)

Claim

- Sun Protection Stick based on mineral UV – Filter (Zinc Oxide & TiO₂)
- This stick provides a rich, cushiony application and smooth emollient feel

Phase	Ingredient	INCI	% w/w	Function
A	SonneNatural® H-203 (Sonneborn)	Olus Oil	32.00	Emollient
	Lilac® (Sonneborn)	C14-22 Alkane	7.00	Emollient
	Beeswax white (Koster Keunen)	Cera Alba	4.50	Stabilizer
	Carnauba Wax T1 (Koster Keunen)	Copernicia Cerifera Cera	8.50	Stabilizer
	Candelilla Wax (Koster Keunen)	Candelilla Cera	7.00	Stabilizer
	Panalane® H-300E (Vantage Specialty Chemicals)	Hydrogenated Polyisobutene	3.00	Waterproofing Agent
B	Xperse® 201 (Umicore)	Zinc Oxide, Caprylic/Capric Triglyceride, Polyhydroxystearic Acid, Triethoxycaprylsilane	12.50	UV – Filter
	Xperse® 401 (Umicore)	Zinc Oxide, Titanium Dioxide, Caprylic/Capric Triglyceride, Polyhydroxystearic Acid, Alumina, Stearic Acid, Triethoxycaprylsilane	25.00	UV – Filter
C	PROTECTION DORÉE 231422 (Fragrance Resources)	Benzyl Salicylate, Limonene, Linalool	0.50	Perfume

Procedure:

- I. Mix the components of phase A and heat up to 80°C with medium speed propeller mixing. Mix until clear.
- II. Slowly add phase 2 and homogenize for 5 minutes. Return to low speed propeller mixing. Begin cooling.
- III. Add phase C between 60-65°C.
- IV. Pour into suitable containers between 55-60°C.



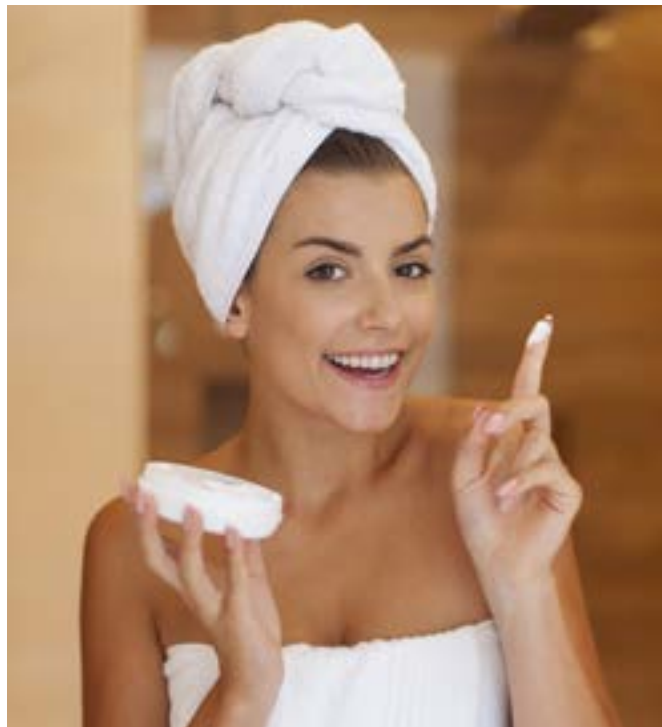
RHEOLOGY & TEXTURE

Polymers

CLARIANT

Aristoflex® range of rheology modifiers offers you exceptional thickening properties and **unique sensorics**.

- Easy to incorporate
- Multi-functional
- Pre-neutralized
- Stable across a wide pH range



Polymer Name	INCI	Properties & Applications
Aristoflex® AVC	Ammonium Acryloyldimethyltaurate / VP Copolymer	<ul style="list-style-type: none"> • Rheology modifier and stabilizer for O/W and W/O emulsions and emulsifier-free formulations. • Creates light, fast breaking formulations
Aristoflex® AVS	Sodium Acryloyldimethyltaurate / VP Copolymer	<ul style="list-style-type: none"> • Ideal for stabilizing self-tanning and skin-whitening formulations. • Broad compatibility over a wide pH range
Aristoflex® AVL	Caprylic / Capric Triglyceride (and) Ammonium Acryloyldimethyltaurate / VP Copolymer (and) Trilaureth-4 Phosphate (and) Polyglyceryl-2-Sesquiisostearate	<ul style="list-style-type: none"> • Rheology modifier and stabilizer for O/W and W/O emulsions and emulsifier-free formulations • Creates light, fast breaking formulations
Aristoflex® BLV	Ammonium Acryloyldimethyltaurate / Beheneth-25 Methacrylate Crosspolymer	<ul style="list-style-type: none"> • Polymeric emulsifier allows for continuous viscosity increase at low concentrations • Suitable for thin lotions • Exhibits synergistic thickening effect with Aristoflex® AVC and HMB
Aristoflex® HMB	Ammonium Acryloyldimethyltaurate / Beheneth-25 Methacrylate Crosspolymer	<ul style="list-style-type: none"> • Hydrophobically modified polymer used as a rheology modifier and/or polymeric emulsifier in formulations with high oil content • Delivers unique silky skin-feel while reducing tackiness
Aristoflex® TAC	Ammonium Acryloyldimethyltaurate / Carboxyethyl Acrylate Crosspolymer	<ul style="list-style-type: none"> • Provides a yield force in surfactant based formulations with the ability to stabilize effect particles.
Aristoflex® Velvet	Polyacrylate Crosspolymer-11	<ul style="list-style-type: none"> • Effective at low use concentrations and exhibits improved salt tolerance in formulations • Adds a caring and luxurious skin feel to formulations • Highly compatible with organic solvents.



Carephos® N

The **complexing efficiency** of CAREPHOS® N is significantly better compared to EDTA. Multivalent metal ions like calcium and magnesium or iron impurities are complexed or bounded effectively. Therefore discoloration will be avoided.

CAREPHOS® N **disperses** inorganic pigments in a brilliant way. This applies for pigments in the decorative cosmetic sector as well as for mineral UV-filter in sun care formulations.

By using CAREPHOS® N in an emulsion the growth of *Aspergillus brasiliensis* and *Candida albicans* is effectively avoided. By using CAREPHOS® N together with common preservatives there are **synergistic effects**.

CAREPHOS® N is a polyphosphate for the application in cosmetic formulations. All CAREPHOS® products are based on mineral raw materials. These are special products in constant quality, available as white powder or granular form and suitable for natural cosmetics.



CAREPHOS® N

INCI: Sodium Polyphosphate

Appearance: white powder

Odour: odorless

KEY BENEFITS

- Alternative for EDTA
- Outstanding complexing performance
- Supports preservation
- Disperses inorganic pigments
- Suitable for natural cosmetics



Panalane®, hydrogenated polyisobutene, is a versatile cosmetic emollient ideal for a wide variety of personal care products. It is available in a low and high viscosity grade that are easily blendable (L-14E and H-300E).

Panalane® is ideal for use in color cosmetic and lip products due to their characteristic rich feel, waterproofing capability and moisturizing effects. Panalane reduces emulsion droplet size and increases viscosity.

Panalane® H-300E is an effective waterproofing agent for sunscreen formulations. It is affordable, easy to use, safe and nonirritating to skin. Panalane® can be readily emulsified at room temperature.

In clinical studies **Panalane® L-14E** was proven to increase skin hydration by reducing the rate of water evaporation from the skin's surface, as measured by trans-epidermal water loss (TEWL). Retention of skin moisture content was also confirmed by increased skin conductance measurements.

Panalane® L-14E

INCI: Hydrogenated Polyisobutene

Panalane® H-300E

INCI: Hydrogenated Polyisobutene

Panalane®, a versatile cosmetic oil, meets a wide range of cosmetic needs:

- Color cosmetics
- Baby Care
- Lipsticks
- Moisturizers
- Sun Care
- Shave Gels
- Skin Care
- ...
- Hair Care

Typical Properties of Panalane®

Polymer Name	Panalane® L-14E	Panalane® H-300E
Appearance	Clear, colorless	Clear, colorless
Odor	Odorless	Odorless
Viscosity (SUS) @ 100 °C	138	2930
Flash Point, °C	> 138	> 235
Specific Gravity @ 15.5°C	0.825	0.885
Refractive Index @ 20°C	1.464	1.498
APHA Color	10	20

GUIDE RECIPE

Sun Oil Spray SPF 20 (SCIII/1001)

Claim

- Sprayable sun oil leaves a non greasy film and has good spreadability
- Water resistant and moisturizing properties

Phase	Ingredient	INCI	% w/w	Function
A	Nuviguard AB-1100 (WSB)	Butyl Methoxydibenzoylmethane	5.00	UV – Filter
	Nuviguard OS-300 (WSB)	Ethylhexyl Salicylate	5.00	UV – Filter
	Nuviguard OC-320 (WSB)	Octocrylene	10.00	UV – Filter
	Liponate® GC (Vantage Specialty Chemicals)	Caprylic/Capric Triglyceride	12.00	Emollient
	Liponate® NEB (Vantage Specialty Chemicals)	C12-15 Alkyl Benzoate	40.00	Emollient
	Liponate® IPP (Vantage Specialty Chemicals)	Isopropyl Palmitate	12.00	Emollient
	Lipovol® Crambe (Vantage Specialty Chemicals)	Crambe Abyssinica Seed Oil	10.00	Emollient
	Panalane® H-300E (Vantage Specialty Chemicals)	Hydrogenated Polyisobutene	5.00	Waterproofing Agent
B	SUNAIID 40124C (Fragrance Resources)	Linalool, Citronellol, Geraniol, Alpha–Isomethyl Ionone	1.00	Perfume

Procedure:

- I. Mix the components of phase A during heat up to 60°C.
- II. Cool down to 35°C and add phase B under stirring until you have a clear solution.





Wildcrafted

Baobab Oil

The *Adansonia digitata* tree is a deciduous tree which can live for many thousands of years, growing up to 30 metres in height and 15 metres in diameter. Baobab, as it is more commonly known, can be traced back to the time of the Egyptians where inscriptions on bark have been found and identified.

Baobab oil is high in vitamin C and D. It has Omega 3, Omega 6 and Omega 9 fatty acids. The oil has strong moisturising properties and is reputed to help skin elasticity. It is a very oxidatively stable oil. This stability derives from the presence of natural antioxidants in the oil, as the composition of the oil (high in unsaturated fatty acids) would normally lead to susceptibility to oxidation.

KEY BENEFITS

- Rich source of vitamin C and D
- Source of Omega 3,6 and 9 fatty acids
- Strong moisturizing properties

APPLICATIONS

- Skin Care
- Hair Care
- Baby Care



About Earthoil

Expertise in all areas of the certified organic oil supply chain

Quality & traceable organic essential and pressed seed oils sourced directly from Earthoil's own grower projects or from its extensive grower network

Support growers in all areas of organic farming – from agronomy advice to certification

Earthoil is the personal care and cosmetic ingredients division of Treatt, specialising in pure, organic, fair trade and natural essential and vegetable seed oils.

Earthoil works closely with certifiers, processors and growers to ensure its products meet the most exacting quality standards.

Operations, overseen by its UK head office, including a manufacturing facility and production base in Kenya and grower projects in Africa. Earthoil manufactures and supplies its organic and fair trade certified products worldwide.

Baobab Oil

INCI: *Adansonia digitata* seed oil

Appearance: golden yellow / clear

Odour: Slight nutty scent (crude)

Source: Wildcrafted baobab seeds

CARE INGREDIENTS



Besides natural vegetable oils Earthoil offers a broad range of high-quality organic essential oils from around the globe. Some, such as tea tree oil, come from our own production sources, while others - grapefruit oil, for instance, from South America, are drawn from an extensive network of organic growers. Whatever essential oil you seek, Earthoil will source it.



Oil Name	Botanical Name	Conventional	Organic	Fair Trade	Refined
Vegetable Oils					
Almond Oil	Prunus dulcis	✓	✓		
Apricot Oil	Prunus armeniaca		✓		
Argan Oil	Argania spinosa		✓		✓
Avocado Oil	Persea armeniaca	✓	✓	✓	✓
Baobab Oil	Adansonia digitata	✓	✓	pending	✓
Cherry Seed Oil	Prunus cerasus		✓		
Coconut Oil	Cocos nucifera		✓	✓	✓
Grapefruit seed oil	Citrus paradisi	✓			✓
Hazelnut oil	Corylus avellana		✓		
Marula oil	Simmondsia chinensis	✓			
Moringa oil	Moringa oleifera	✓			✓
Orange Seed Oil	Citrus sinensis	✓			✓
Pomegranate Oil	Punica granatum	✓	✓		
Papaya oil	Carica papaya	✓			✓
Sesame Oil	Sesamum indicum		✓	✓	✓
Essential Oils					
Grapefruit White Oil	Citrus paradisi	✓	✓		LFC
Lemon Oil	Citrus limonum	✓	✓		LFC
Mandarin Green Oil	Citrus reticulata	✓	✓		LFC
Rosemary Oil	Rosmarinus officinalis	✓	✓		LME
Tea Tree Oil	Melaleuca alternifolia	✓	✓	✓	LME
Bergamot Oil	Citrus bergamia	✓	✓		
Buchu Oil	Agathosma betulina	✓	✓		
Eucalyptus Citriodora Oil	Eucalyptus citriodora	✓	✓		
Orange Sweet Oil	Citrus sinensis	✓	✓		
Ylang Ylang Extra Oil	Cananga odorata	✓	✓		

LFC = Low Furano Coumarin · LME = Low Methyl Eugenol

sonneborn

REFINED PRODUCTS

SonneNatural® H-203

INCI: *Olus Oil*

Appearance: white paste

Odour: odorless

SonneNatural® H-203 is an ideal, natural and renewable offering for use in personal care and cosmetic applications where an emollient, moisturizer, conditioning agent, solubilizer or dispersing agent is required. It provides an excellent moisture retention and have a superior UV and microbial stability profile.

SonneNatural® H-203 is applicable to many cosmetic applications, such as: hand/body lotions, AP/Deo products, fragrance sticks, body washes, hair care products and sun care products.



KEY BENEFITS

- Suitable for petroleum-free formulations
- Moisturizing & nourishing properties
- Short play-time
- Medium cushion, medium/low gloss, and minimal spreadability

Features	Benefits
All-Natural, Vegetable Product	Excellent Moisture Retention
Physical Properties/TEWL Comparable to Petrolatum	Consistent Quality
Stringent Quality Control	Naturally Preserved, Long Shelf Life
Superior UV and Microbial Stability	Does Not Support Microbial Life
USP <51> Compliant	Good Safety Profile
CTFA Compliant: E. coli, S. aureus, and P. aeruginosa	
Global Supplier	

Lilac® is a colorless, odorless liquid with the sensory characteristics of cyclomethicone for use in personal care products. This product is a highly refined mixture of alkanes with good spreadability, short play time, and a powdery, soft after-feel that can be used as a potential alternative to D5 silicones for emolliency in cosmetic formulations. The unique sensory attributes of **Lilac®** make it an ideal ingredient for any cosmetic application, such as: hand/body lotions, AP/Deo products, fragrance sticks, body washes, hair care products and sun care products.

Lilac®

INCI: *C14-22 Alkane*

Appearance: colorless liquid

Odour: odorless

KEY BENEFITS

- Dry, soft after-feel
- Short play-time
- Very good emollient properties
- High gloss

GUIDE RECIPE

O/W Day Cream with SPF 15 (SCI/1002)

Claim

- Day Cream is a light, silky, moisturizing cream for face and neck
- With ultraviolet light protection and offers an estimated SPF-15

Phase	Ingredient	INCI	% w/w	Function
A	Deionized water	Aqua	64.00	
	Carephos® N (BK Giullini)	Sodium Polyphosphate	0.50	Complexing Agent
	Glycerin 99%	Glycerin	3.00	Humectant
	XG FED CS-PC	Xanthan Gum	0.60	Rheology Modifier
	Allantoin (Clariant)	Allantoin	0.30	Active
B	Hostaphat® KW 340 D (Clariant)	Triceteareth-4 Phosphate	2.00	Emulsifier
	Lanette® O	Cetearyl Alcohol	3.00	Emulsifier/ Stabilizer
	Liponate® NEB (Vantage Specialty Chemicals)	C12-15 Alkyl Benzoate	4.00	Emollient
	Liponate® GC (Vantage Specialty Chemicals)	Caprylic/Capric Triglyceride	4.00	Emollient
	Nuviguard AB-1100 (WSB)	Butyl Methoxydibenzoylmethane	5.00	UV – Filter
	Nuviguard OC-320 (WSB)	Octocrylene	2.00	UV – Filter
	Nuviguard OS-300 (WSB)	Ethylhexyl Salicylate	5.00	UV – Filter
	Zano® 10 Plus (Umicore)	Zinc Oxide, Triethoxycaprylylsilane	3.00	UV – Filter
	C	Kostermilk 102 (Koster Keunen)	Aqua, Beeswax, Glycerin, Trideceth-6 Phosphate, Sodium Hydroxide, Phenoxyethanol	2.00
Phenonip™ ME (Clariant)		Phenoxyethanol, Methylparaben, Ethylparaben	0.60	Preservative
PROTECTION DORÉE 231422 (Fragrance Resources)		Benzyl Salicylate, Hexyl Cinnamal, Linalool, Limonene	0.50	Perfume
D	Citric Acid 10%	Citric Acid	Qs	pH Adjuster

Procedure:

- I. Mix the components of phase A and heat up to 80°C.
- II. Mix the components of phase B and heat up to 80°C.
- III. Add phase B to phase A and homogenize for 5 minutes.
- IV. Cool down to 35°C and add phase C.
- V. Set pH-value with phase D.



The **KemSpheres™** series of encapsulated actives can be used in any cosmetic formulation more easier than any other delivery system offers. Controlled retard release offers a much higher bioavailability than common systems do.

KEY BENEFITS

- Deliver more active quicker
- Stability of actives
- Less irritating
- Long lasting
- Easy to formulate



Active Enhancement

KemSpheres™ R	KemSpheres™ T	KemSpheres™ Q10
Active Substance: <i>Retinol</i>	Active Substance: <i>Tocopherol</i>	Active Substance: <i>Co-enzyme Q10</i>
INCI: <i>Glycine Soja Oil, Aqua, Glycerin, Cera Alba, Retinol, Laureth-23, Trideceth-6 Phosphate, Phenoxyethanol, Triethanolamine, Ceramide-3</i>	INCI: <i>Aqua, Cetyl Palmitate, Tocopherol, Glycerin, Sodium Laureth Sulfate, PEG-100 Stearate, Xanthan Gum, Phenoxyethanol</i>	INCI: <i>C12-15 Alkyl Benzoate, Aqua, Caprylic/Capric Triglyceride, Ubiquinone, Cetyl Palmitate, Laureth-23, Glycerin, Trideceth-6 Phosphate, Cetearyl Alcohol, Triethanolamine, Phenoxyethanol</i>

Sensory Effects

KemSpheres™ M	KemSpheres™ VBE
Active Substance: <i>Menthol</i>	Active Substance: <i>Vanillyl butyl ether</i>
INCI: <i>Menthol, Aqua, Octyldodecanol, Glycerin, Laureth-23, Trideceth-6 Phosphate, Triethanolamine, Phenoxyethanol</i>	INCI: <i>Aqua, Cetyl Palmitate, Vanillyl Butyl Ether, C12-15 Alkyl Benzoate, Octyldodecanol, Glycerin, Laureth-23, Trideceth-6 Phosphate, Triethanolamine, Phenoxyethanol, Xanthan Gum</i>

GUIDE RECIPE

Cooling After Sun Spray (SCIII/1000)

Claim

- Refreshing and caring After Sun Spray with KemSpheres™ M
- Moisturizes and soothes the skin and makes it feel silky soft

Phase	Ingredient	INCI	% w/w	Function
A	Deionized water	Aqua	Qs	
	Glycerin 99%	Glycerin	5.00	Humectant
	Aristoflex® AVL (Clariant)	Caprylic/Capric Triglyceride, Ammonium Acryloyldimethyltaurate/ VP Copolymer, Trilaureth-4 Phosphate, Polyglyceryl-2-Sesquistearate	1.50	Rheology Modifier
	Hostaphat® KL 340 D (Clariant)	Trilaureth-4 Phosphate	0.90	Emulsifier/ Stabilizer
B	Blandol® (Sonneborn)	Paraffinum Liquidum	8.00	Emollient
	Liponate® IPP (Vantage Specialty Chemicals)	Isopropyl Palmitate	3.00	Emollient
	Lanette® 0	Cetearyl Alcohol	0.50	Emulsifier/ Stabilizer
	Liponate® GC (Vantage Specialty Chemicals)	Caprylic/Capric Triglyceride	1.40	Emollient
	Lipomulse® Luxe (Vantage Specialty Chemicals)	Cetearyl Alcohol, Glyceryl Stearate, PEG-40 Stearate, Cetearth-21	3.00	Emulsifier/ Stabilizer
	Silcare® Silicone 41M15 (Clariant)	Caprylyl Methicone	1.00	Conditioning Agent
	Nipaguard® PO 5 (Clariant)	Phenoxyethanol, Piroctone Olamine	0.50	Preservative
C	Vitamin E-Acetate Care	Tocopheryl Acetate	1.00	Antioxidant
	KemSpheres™ M (OTC)	Menthol, Aqua, Octyldodecanol, Glycerin, Laureth-23, Trideceth-6 Phosphate, Triethanolamine, Phenoxyethanol	5.00	Active
	Kostermilk 102 (Koster Keunen)	Aqua, Cera Alba, Glycerin, Trideceth-6 Phosphate, Sodium Hydroxide, Phenoxyethanol	5.00	Moisturizer
D	Gorgonian Extract® GC (Vantage Specialty Chemicals)	Caprylic/Capric Triglyceride, Sea Whip Extract	1.00	Active

Procedure:

- I. Heat A to 60°C.
- II. Heat C to 60°C until homogeneous.
- III. Add B to II. And stir until homogeneous.
- IV. Add I. to III. and cool down to approx. 35°C under stirring.
- V. Add components of D to IV. and stir until cool.





Gorgonian Extract® GC

INCI: Caprylic/Capric Triglyceride (and)Sea Whip Extract

Appearance: Clear to slight hazy amber liquid

Odour: Characteristic

Efficacy: supported by comprehensive study

KEY BENEFITS

- Marine, algae derived
- Highly effective anti-inflammatory ingredient
- Prevents skin inflammation
- Ideal for sensitive skin

Gorgonian Extract® GC, is a natural anti-inflammatory ingredient that is safe, effective, and environmentally friendly. It is an extract from the marine organism Pseudopterogorgia elisabethae (sea whip), a renewable resource harvested from the Caribbean Sea, which consist primarily of powerful anti-inflammatory compounds called pseudopterosins. Pseudopterosins have been shown to inhibit the production of inflammatory mediators.

APPLICATIONS

- Sun/after sun products
- After-shave products
- Sensitive skin products
- Eye care products
- Baby Care

Liposhield® HEV Melanin

INCI: Melanin

Appearance: Dark brown liquid

Odour: Characteristic

KEY BENEFITS

- Protects skin from harmful effects of HEV light
- Prevents oxidative stress
- Prevents skin aging
- Prevents the generation of an impaired barrier

Liposhield® HEV Melanin, is a fractionated melanin compound, designed to be used topically as an additional environmental defense against High Energy Visible light (HEV). It is designed to shield the skin from high energy blue/violet visible light. This novel, patent-pending ingredient may help to prevent premature aging and hyperpigmentation. **Liposhield® HEV Melanin** is tailored specifically to absorb light in the range of 400-500 nm wavelengths.

APPLICATIONS

- Anti-aging treatment products
- Sunscreen products
- Foundation make ups
- Moisturizing creams and lotions

PRESEVATIVES

Innovative Alternatives For Parabens



Nipaguard® Zero Blends

ADVANTAGES

- Reliable and effective paraben-alternative
- Comparable costs and effectiveness as parabens
- Effective at low concentrations
- Based on **Velsan® SC** - a 100% renewable synergistic booster

APPLICATIONS

- Rinse-off
- Leave-on
- Wet Wipes



Product	INCI	Form	Leave-on	Rinse-off	Wet Wipes	pH-range	Max. Temp.	Rec. use level (%)	G-	G+	Y	M
Nipaguard® SCE (Ecocert approved)	Sorbitan Caprylate (and) Propanediol (and) Benzoic Acid	Liquid	✓	✓	✓	4.0 - 8.0	< 80°C	0.5 – 1.5	++	++	++	++
Nipaguard® SCP	Phenoxyethanol (and) Sorbitan Caprylate	Liquid	✓	✓	✓	4.5 - 8.5	< 80°C	0.5 – 1.0	++	++	++	++
Nipaguard® SCV	Sorbitan Caprylate (and) Phenoxyethanol (and) Benzyl Alcohol (and) Benzoic Acid	Liquid	✓	✓	✓	4.0 - 8.0	< 40°C	0.5 – 1.0	++	++	++	++

G-: Gram- Bacteria / G+: Gram+ Bacteria / Y: Yeast / M: Mold
 ++: good / +: medium / 0: none



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