



SASOL

ISOFOL

Adding Value to Your
Personal Care Products

Sasol Performance Chemicals



Content

1. About Us	3
2. ISOFOL - Versatile Emollients of High Purity	4
Description	4
Features	4
ISOFOL Product Range	7
Applications.....	9
3. Cosmetic Formulary	10
3.1 Hair Care.....	11
Transparent Shampoo with Natural Oil and UV-Filter.....	11
Hair Conditioner with Silicone Oil.....	12
3.2 Skin Care	13
Lip Care with Natural Based and Caring Emollients (SPF 20 - EU)	13
Winter Cream with High Amounts of Caring Oils	14
Cleansing Milk.....	15
Cleansing and Caring Mask	16
3.3 Sun Care	17
Sunscreen Cream with ZnO (SPF 50)	17
Sunscreen Lotion with ZnO (SPF 30)	18
Transparent Sunscreen Pump Spray Without Ethanol (SPF 50).....	19
Aftersun Milk	20
Self Tanning Lotion	21
Supplier List.....	22
INCI Name List	22

1. About Us

Sasol's Performance Chemicals business unit markets a broad portfolio of organic and inorganic commodity and speciality chemicals. Our business consists of four key business divisions: Organics, Inorganics, Wax and PCASG (Phenolics, Carbon, Ammonia and Speciality Gases). Our offices in 18 countries serve customers around the world with a multifaceted portfolio of state-of-the-art chemical products and solutions for a wide range of applications and industries.

Our key products include surfactants, surfactant intermediates, fatty alcohols, linear alkyl benzene (LAB), short-chain linear alpha olefins, ethylene, mineral oil-based and synthetic paraffin waxes, cresylic acids, high-quality carbon solutions and high-purity and ultra-high-purity alumina. Our Speciality Gases business supplies its customers with high-quality ammonia, hydrogen and CO₂, as well as liquid nitrogen, liquid argon, krypton and xenon gases.

Our products are as individual as the industrial applications they serve, with tailor-made solutions creating real business value for customers. Ongoing research activities result in a continuous stream of innovative product concepts that help our customers position themselves successfully in future markets.

Our products are used in countless applications in our daily lives to add value, security and comfort. Typical examples include detergents, cleaning agents, personal care, construction, paints and coatings, leather and metal processing, hot-melt adhesives, bitumen modification and catalyst support for automotive catalysts and other diverse specialty applications including oil and gas recovery, aroma production, plastic stabilisation, and polymer production. Every day, our researchers explore ways to improve our products and develop innovations that improve the quality of people's lives.



2. ISOFOL – Versatile Emollients of High Purity

Description

ISOFOL is the registered trademark of Sasol Performance Chemicals for saturated primary alcohols with defined branching of the carbon chain.

Such alcohols are chemically described as 2-alkyl-1-alkanols and are well known as Guerbet alcohols.

ISOFOL alcohols are manufactured from oleochemical and synthetic sources.

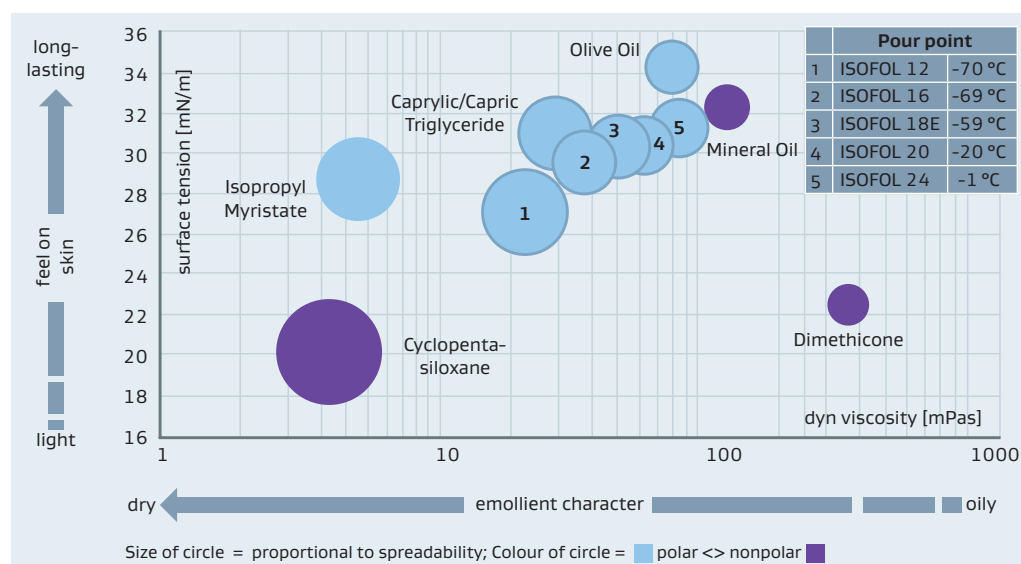
Features

The **ISOFOL** alcohols C12 to C24 are liquid at ambient temperature, whereas corresponding linear and saturated alcohols are solid.

Due to complete saturation, **ISOFOL** alcohols demonstrate excellent oxidative and thermal stability.

ISOFOL alcohols are clear and colourless, medium spreading emollient characterised by a very low point (see Figure 1).

Figure 1:
ISOFOL – emollient properties at a glance



ISOFOL emollients are compatible with silicones and lipophilic cosmetic ingredients (see Table 1)

Table 1: ISOFOL – solubility in cosmetic oils and solvents at ambient temperature

Solubility in	ISOFOL 12	ISOFOL 16	ISOFOL 18	ISOFOL 18T
Water	O	O	O	O
Glycerine	O	O	O	O
Propylene Glycol	X	O	X	O
Ethanol	X	X	X	X
Caprylic/Capric Triglyceride	X	X	X	X
Olive Oil	X	X	X	X
Isopropyl Myristate	X	X	X	X
Mineral Oil* (150 cSt)	X	X	X	X
Cyclopentasiloxane	X	X	X	X
Dimethicone (350 cSt)	X	X	X	X

continued

Solubility in	ISOFOL 18E	ISOFOL 20	ISOFOL 24
Water	O	O	O
Glycerine	O	O	O
Propylene Glycol	O	O	O
Ethanol	X	X	X
Caprylic/Capric Triglyceride	X	X	X
Olive Oil	X	X	X
Isopropyl Myristate	X	X	X
Mineral Oil* (150 cSt)	X	X	X
Cyclopentasiloxane	X	X	X
Dimethicone (350 cSt)	O	O	O

*Mineral Oil (US)
Paraffinum Liquidum (EU)

Solubility:
O = insoluble
X = soluble in any ratio

ISOFOL emollients are effective solubilisers for liquid and crystalline UV filters (see Table 2).

Table 2:
ISOFOL – solubility of liquid and crystalline UV filters at ambient temperature

UV filter	OS	OCR	HMS	EHT
Filter type	UVB	UVB / shorter UVA	UVB	UVB
ISOFOL 12	X	X	X	1 %
ISOFOL 16	X	X	X	1 %
ISOFOL 18T	X	X	X	2 %
ISOFOL 18E	X	X	X	2 %
ISOFOL 20	X	X	X	3 %
ISOFOL 24	X	O	X	1 %

continued

UV filter	BMDBM	BEMT	DHHB	Benzo-phenone-3
Filter type	UVA	UVA/UVB	UVA long wave	UVA/ shorter UVB
ISOFOL 12	0.7 %	0.2 %	4 %	3 %
ISOFOL 16	0.8 %	0.1 %	3 %	3 %
ISOFOL 18T	2 %	1 %	3 %	3 %
ISOFOL 18E	2 %	1 %	3 %	3 %
ISOFOL 20	2 %	2 %	3 %	2 %
ISOFOL 24	3 %	2 %	3 %	2 %

OS = Ethylhexyl salicylate (INCI), Octisalate (USAN)
 OCR = Octocrylene (INCI, USAN)
 HMS = Homosalate (INCI, USAN)
 EHT = Ethylhexyl triazone (INCI)
 BMDBM = Butylmethoxydibenzoylmethane (INCI), Avobenzene (USAN)
 BEMT = Bis-ethylhexyloxyphenol methoxy phenyl triazine (INCI), Bemotrizinol (USAN)
 DHHB = Diethylamino hydroxybenzoyl hexyl benzoate (INCI)

Solubility:
 O – insoluble
 X – soluble in any ratio



ISOFOL Product Range

Typical physical properties are listed in the table below. Actual properties will vary from lot to lot.

Typical properties		ISOFOL 12	ISOFOL 16	ISOFOL 18 T	ISOFOL 18 E
INCI name		Butyloctanol	Hexyl-decanol	Octyldecanol Isostearyl Alcohol	Octyldecanol Isostearyl Alcohol
CAS no.		3913-02-08	2425-77-6	70693-04-8	70693-04-8
Appearance @20 °C		clear liquid	clear liquid	clear liquid	clear liquid
Molecular weight	g/mol	186	242	267 to 285	269 to 279
Purity	wt%	97 min.	97 min.	95 min.	95 min.
Water content	wt%	0.1 max.	0.1 max.	0.1 max.	0.1 max.
Colour	Hazen	10 max.	10 max.	10 max.	10 max.
Acid number	mg KOH/g	0.05 max.	0.05 max.	0.05 max.	0.05 max.
Ester number	mg KOH/g	0.3 max.	0.3 max.	0.5 max.	0.5 max.
Iodine number	mg I/100g	0.5 max.	0.5 max.	0.5 max.	0.5 max.
Boiling range @33 mbar	°C	145 to 149	193 to 197	207 to 236	211 to 218
Flash point	°C	120	156	170	170
Pour point	°C	-70	-69	-59	-59
Refractive index	nD20	1.443	1.450	1.452	1.452
Viscosity @20 °C	mPas	23	38	50	50
Density @20 °C	g/ml	0.831 to 0.835	0.835 to 0.840	0.835 to 0.839	0.835 to 0.839
Surface Tension @20 °C	mN/m	27	29	29	30



ISOFOL Product Range

Typical physical properties are listed in the table below. Actual properties will vary from lot to lot.

Typical properties		ISOFOL 20	ISOFOL 24	ISOFOL 28
INCI name		Octyldodecanol	Decyltetradecanol	Dodecylhexadecanol
CAS no.		5333-42-6	58670-89-6	276-627-0
Appearance @20 °C		clear liquid	clear liquid	colourless solid
Molecular weight	g/mol	298	354	410
Purity	wt%	97 min.	97 min.	90 min.
Water content	wt%	0.1 max.	0.1 max.	0.1 max.
Colour	Hazen	10 max.	10 max.	40 max.
Acid number	mg KOH/g	0.05 max.	0.05 max.	0.05 max.
Ester number	mg KOH/g	0.5 max.	0.5 max.	0.5 max.
Iodine number	mg I/100g	0.5 max.	0.5 max.	0.5 max.
Boiling range @33 mbar	°C	234 to 238	271 to 275	–
Flash point	°C	180	230	240
Pour point	°C	-20	-1	–
Melting range	°C	–	–	32 to 39
Refractive index	nD20	1.455	1.457	1.455 (40 °C)
Viscosity @20 °C	mPas	61	86	40 (40 °C)
Density @20 °C	g/ml	0.837 to 0.841	0.840 to 0.844	0.830 (40 °C)
Surface Tension @20 °C	mN/m	30	31	–

Packaging:

170 kg in steel drums

Packaging compatibility:

Compatible with HDPE coated with EVOH or PA, PP,PVC and PET at 20 °C and 50 °C

Storage:

Protect from moisture and sunlight; keep between 5 and 30 °C

Shelf life:

48 months from the date of manufacture, when properly stored and handled

Certificates (Sasol Germany GmbH):

ISO 14001; ISO 9001; OHSAS 18001, EMAS; Kosher Certificate



Applications

ISOFOL emollients provide excellent emolliency and conditioning properties for skin and hair care.

The structure of **ISOFOL** emollients leads to low pour points, hydrolytical and thermal stability which is beneficial in formulating temperature and pH sensitive products.

ISOFOL alcohols are versatile emollients for a broad range of cosmetic formulations.

The following cosmetic formulary gives some formulation examples how to apply **ISOFOL** emollients in hair, skin and sun care products.

Sasol is a producer of ingredients for cosmetics and personal care products. Our global manufacturing network along with highly skilled marketing, research and development teams are dedicated to helping you achieve your performance and formulation requirements. Take advantage of Sasol's experience in product development.



3. Cosmetic Formulary



3.1 Hair Care

Transparent Shampoo with Natural Oil and UV-Filter

Formulation No.: 12831

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	MARLINAT 242/90 MC	1	MIPA Laureth Sulfate (and) Propylene Glycol	16.0	Base surfactant, high foaming power
	MARLOWET CG	1	PEG-18 Castor Oil Dioleate	4.5	Emulsifier for oils
	Jojoba oil	32	Simmondsia Chinensis (Jojoba) Seed Oil	0.8	Natural oil
	ISOFOL 12	1	Butyloctanol	0.5	Light and good spreading emollient, solvent
	Uvinul A Plus B	17	Ethylhexyl Methoxycinnamate (and) Diethylamino Hydroxybenzoyl Hexyl Benzoate	2.5	UVA/UVB-filter
	Perfume "Care"	27	Parfum (EU) / Fragrance (US)	0.2	
B	Tego Betain F 50	3	Cocamidopropyl Betaine	5.0	Co-surfactant
	NaCl		Sodium Chloride	0.5	
	Demin. water		Aqua	20.0	
C	U-Care Polymer JR-400	75	Polyquaternium-10	0.2	Quaternary conditioning agent
	Demin. water		Aqua	20.0	
D	Demin. water		Aqua	add to 100	
E	Preservative			q.s.	Preservative
	Glucamate DOE-120 Syrup	30	PEG-120 Methyl Glucose Dioleate	q.s.	Thickening agent

*) supplier list page 22

Preparation (at room temperature):

1. Homogenize phase (A), (B) and (C) separately
2. Add phase (B) to (A) and homogenize
3. Add phase (C) to (AB) and homogenize
4. When phase (ABC) is transparent add phase (D) and homogenize
5. Adjust the pH-value
6. Add phase (E) to (ABCD) and homogenize

Storage stability in terms of appearance:

Stable at 8 °C, room temperature and 40 °C for at least 3 months

Appearance:

liquid-viscous

Hair Conditioner with Silicone Oil

Formulation No.: 12736

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	GALENOL 1618 AE	1	Cetearyl Alcohol (and) Cetareth-20	2.5	Nonionic self-emulsifying mixture for O/W-emulsions
	NAFOL 1618 H	1	Cetearyl Alcohol	1.0	Co-emulsifier, consistency regulator
	COSMACOL ETI	18	Di-C12-13 Alkyl Tartrate	0.5	Polar emollient and hair conditioning agent
	MERKUR 773	2	Petrolatum	0.5	Emollient
	ISOFOL 24	1	Decyltetradecanol	1.0	Emollient and hair conditioning agent
	Jojoba oil	32	Simmondsia Chinensis (Jojoba) Seed Oil	0.5	Natural oil
	Element14 PDMS 100K-P	55	Dimethicone	0.5	Hair conditioning agent
	Genamin BTLF	8	Behentrimonium Chloride	2.5	Quaternary conditioning agent
B	Demin. water		Aqua	add to 100	
	Amaze XT	41	Dehydroxyxanthan Gum	0.3	Fixative and thickener, suspending agent
C	Perfume „Care“	27	Parfum (EU) / Fragrance (US)	0.1	
	Citric Acid		Citric Acid	q.s.	pH-adjustment
D	Preservative			q.s.	

*) supplier list page 22

Preparation:

1. Heat phase (A) and (B) separately to 75 °C
2. Add phase (B) to (A) and homogenize
3. Cool to 35 °C and add phase (C) to (AB) and homogenize
4. Add phase (D) to (ABC) and homogenize
5. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s⁻¹):

~ 5,800 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

viscous-creamy



3.2 Skin Care

Lip Care with Natural Based and Caring Emollients (SPF 20 - EU)

Formulation No.: 12532

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	SASOLWAX 3971	2	Microcrystalline Wax	20.0	Structure and hardness, consistency regulator
	Cocoa butter	32	Theobroma Cacao (Cocoa) Seed Butter	10.0	Natural butter
	Shea butter	32	Butyrospermum Parkii (Shea Butter)	10.0	Natural butter
	NAFOL 1618 S	1	Cetearyl Alcohol	15.0	Co-emulsifier, consistency regulator
	Bees wax	32	Cera Alba	2.0	Natural wax, consistency regulator
	Eusolex 9020	9	Butyl Methoxydibenzoylmethane	5.0	UVA-filter
B	ISOFOL 20	1	Octyldodecanol	15.0	Medium spreading emollient
	Castor oil	32	Ricinus Communis (Castor) Seed Oil	4.0	Natural oil
	Tocopheryl acetate	4	Tocopheryl Acetate	q.s.	Active care agent
	PARAFOL 16-97	1	Hexadecane	2.5	Medium spreading emollient
	Eusolex OCR	9	Octocrylene	10.0	UVB-filter
	Eusolex OS	9	Ethylhexyl Salicylate	5.0	UVB-filter
	Tocopherol	4	Tocopherol	q.s.	Antioxidant
	Perfume „Vanilla“		Parfum (EU) / Fragrance (US)	0.4	

*) supplier list page 22

Preparation:

1. Heat phase (A) to 70 °C and homogenize
2. Add phase (B) and homogenize
3. Cool to 35 °C - 40 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

viscous

Information:

Calculated SPF: 22.2UVA-PF/SPF [>0.33]: 0.69 Critical Wavelength: 376 nm

Winter Cream with High Amounts of Caring Oils

Formulation No.: 13011

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Demin. water		Aqua	add to 100	
	Glycerine		Glycerin	5.0	Moisturizing agent
	Keltrol CGT	5	Xanthan Gum	0.3	Thickening agent, hydrocolloid
	Aristoflex AVC	8	Ammonium Acryloyldimethyltaurate/ VP Copolymer	0.5	Gelling agent and thickener
B	CERALUTION H	1	See page 22	4.0	Emulsifier, reduces crow feet wrinkles, moisturizer
	NAFOL 1618 H	1	Cetearyl Alcohol	1.5	Co-emulsifier, consistency regulator
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	2.5	Wrinkle reduction, moisturizing emollient
	ISOFOL 18T	1	Octyldecanol	3.0	Medium spreading emollient
	COSMACOL ECL	18	Tri-C14-15 Alkyl Citrate	1.5	Mild keratolytic, skin smoothing emollient
	COSMACOL EBL	18	C12-15 Alkyl Benzoate	3.0	Solubilizing agent
	Calendula oil	32	Calendula Officinalis Flower Extract	1.0	Natural oil
	Sunflower oil	32	Helianthus Annuus (Sunflower) Seed Oil	4.0	Natural oil
	Almond oil	32	Prunus Amygdalus Dulcis (Sweet Almond) Oil	2.0	Natural oil
	Avocado oil	32	Persea gratissima (Avocado) oil	1.0	Natural oil
C	Tocopherol	4	Tocopherol	q.s.	Antioxidant
	Preservative			q.s.	
	Perfume "Care"	27	Parfum (EU) / Fragrance (US)	0.05	

*) supplier list page 22

Preparation:

1. Heat phase (A) and (B) separately to 70 °C
2. Add phase (B) to (A) and homogenize
3. Cool to 35 °C and add phase (C) to (AB) and homogenize
4. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s⁻¹):

~ 39,000 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

viscous

Cleansing Milk

Formulation No.: 12765

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Demin. water		Aqua	add to 100	
	Glycerine		Glycerin	5.0	Moisturizing agent
	Keltrol CG T	5	Xanthan Gum	0.3	Thickening agent, hydrocolloid
	D-Panthenol (w = 0.75)	4	Panthenol	1.0	Active care agent
	Allantoin	9	Allantoin	0.3	Active care agent
B	CERALUTION H	1	See page 22	1.5	Emulsifier, reduces crow feet wrinkles, moisturizer
	NAFOL 1618 H	1	Cetearyl Alcohol	1.0	Co-emulsifier, consistency regulator
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	3.0	Moisturizing emollient, sebum regulating
	ISOFOL 20	1	Octyldodecanol	5.0	Medium spreading oil
	PARAFOL 12-97	1	Dodecane	3.5	Good spreading emollient
	Olive oil	32	Olea Europaea (Olive) Fruit Oil	5.0	Natural oil
	Softisan 100	31	Hydrogenated Coco-Glycerides	1.0	Hard fat, consistency regulator
C	Carbopol Ultrez 21 (w = 0.03)	30	Acrylates/C10-30 Alkyl Acrylate Crosspolymer	5.0	Thickening and stabilizing agent
D	Preservative			q.s.	
	Perfume "Care"	27	Parfum (EU) / Fragrance (US)	0.1	
	NaOH (w = 0.10)		Sodium Hydroxide	0.7	Neutralizing agent

*) supplier list page 22

Preparation:

1. Heat phase (A) and (B) separately to 70 °C
2. Add phase (B) to (A) and homogenize
3. Cool to 35 °C and add phase (C) and (D) to (AB) and homogenize
4. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s⁻¹):

~ 13,000 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

liquid



Cleansing and Caring Mask

Formulation No.: 12770

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Demin. water		Aqua	add to 100	
	Glycerine		Glycerin	8.0	Moisturizing agent
	Keltrol CG T	5	Xanthan Gum	0.3	Thickening agent, hydrocolloid
	Allantoin	9	Allantoin	0.2	Active care agent
B	CERALUTION H	1	See page 22	4.0	Emulsifier, reduces crow feet wrinkles, moisturizer
	NAFOL 1618 H	1	Cetearyl Alcohol	2.0	Co-emulsifier, consistency regulator
	COSMACOL OE	1	Dicaprylyl Ether	4.0	Very light, good spreading emollient
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	2.0	Wrinkle reduction, moisturizing emollient
	COSMACOL ECL	18	Tri-C14-15 Alkyl Citrate	2.0	Mild keratolytic, skin smoothing emollient
	COSMACOL ELI	18	C12-13 Alkyl Lactate	2.0	Moisturizing emollient, sebum regulating
	COSMACOL ECI	18	Tri-C12-13 Alkyl Citrate	3.0	Good spreading emollient
	ISOFOL 20	1	Octyldodecanol	6.0	Medium spreading emollient
	Jjoba oil	32	Simmondsia Chinensis (Jjoba) Seed Oil	1.0	Natural oil
	Mango butter	32	Mangifera Indica (Mango) Seed Butter	2.0	Natural butter
	Tocopheryl acetate	4	Tocopheryl Acetate	q.s.	Active care agent
C	Demin. water		Aqua	10.0	
	Panthenol (w = 0.75)	4	Panthenol	0.5	Active care agent
D	Demin. water		Aqua	25.0	
	Carbopol Ultrez 20 Polymer	30	Acrylates / C10-30 Alkyl Acrylate Crosspolymer	0.3	Thickening and stabilizing agent
	NaOH (w = 0.1)		Sodium Hydroxide	0.6	Neutralizing agent
E	Preservative			q.s.	
	Perfume "Care"	27	Parfum (EU) / Fragrance (US)	0.1	

*) supplier list page 22

Preparation:

1. Heat phase (A) and (B) separately to 70 °C
2. Add phase (B) to (A) and homogenize
3. Add phase (C) to (AB) and homogenize
4. Cool to 35 °C and add phase (D) and (E) to (ABC) and homogenize
5. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s⁻¹):

~ 86,000 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

viscous

3.3 Sun Care

Sunscreen Cream with ZnO (SPF 50)

No.: 12798

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Demin. water		Aqua	add to 100	
	Z-Cote HP1	17	Zinc Oxide (and) Triethoxycaprylylsilane	22.0	Inorganic UV-filter
B	Keltrol CG T	5	Xanthan Gum	0.3	Thickening agent, hydrocolloid
	Glycerine		Glycerin	1.0	Moisturizing agent
	CERALUTION ES	1	See page 22	0.5	Emulsifier and dispersant
C	CERALUTION H	1	See page 22	4.0	Emulsifier, reduces crow feet wrinkles, moisturizer
	NAFOL 1618 H	1	Cetearyl Alcohol	1.5	Co-emulsifier, consistency regulator
	COSMACOL ECL	18	Tri-C14-15 Alkyl Citrate	0.5	Mild keratolytic emollient, skin smoothing
	Eusolex 9020	9	Butyl Methoxy- dibenzoylmethane	3.0	UVA-filter
	Eusolex OCR	9	Octocrylene	10.0	UVB-filter
	Eusolex 2292	9	Ethylhexyl Methoxycinnamate (and) BHT	7.5	UVB-filter
	Tocopheryl Acetate		Tocopheryl Acetate	0.2	Improves photo protection, active care agent
	ISOFOL 16	1	Hexyldecanol	5.0	Medium spreading emollient
D	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	2.0	Wrinkle reduction emollient, moisturizing
	Allianz OPT	84	Acrylates/C12-22 Alkyl Methacrylate Copolymer	1.0	Thickening and stabilizing agent
	Preservative	1		0.7	Medium spreading emollient

*) supplier list page 22

Preparation:

1. Homogenize phase (A) until the zinc oxide is well dispersed
2. Add phase (B) to (A)
3. Heat phase (AB) and (C) separately to 70 °C
4. Add phase (C) to (AB) and homogenize
5. Cool to 35 °C and add phase (D) to (ABC) and homogenize
6. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s-1):

~ 75,500 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Information:

Calculated SPF: 51.0 UVA/UVB Ratio: 0.75 Star Rating: ***
 UVA-PF/SPF [>0.33]: 0.28 Critical Wavelength: 375 nm

Sunscreen Lotion with ZnO (SPF 30)

No.: 12963

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Demin. water		Aqua	add to 100	
	Glycerine		Glycerin	5.0	Moisturizing agent
	Keltrol CG T	5	Xanthan Gum	0.5	Thickening agent, hydrocolloid
B	CERALUTION H	1	See page 22	3.5	Emulsifier, reduces crow feet wrinkles, moisturizer
	NAFOL 1618 H	1	Cetearyl Alcohol	1.0	Co-emulsifier, consistency regulator
	Eusolex 9020	9	Butyl Methoxy- dibenzoylmethane	3.0	UVA-filter
	Eusolex OCR	9	Octocrylene	8.0	UVB-filter
	Eusolex 2292	9	Ethylhexyl Methoxycinnamate (and) BHT	5.0	UVB-filter
	Tocopheryl Acetate	4	Tocopheryl Acetate	0.5	Improves photo protection, active care agent
	Arlacel P135		PEG-30 Dipolyhydroxystearate	0.2	Emulsifier
	Ganex V 220		VP/Eicosene Copolymer	1.5	Film former, water resistance improver
C	ISOFOL 16	1	Hexyldecanol	6.0	Medium spreading emollient
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	4.0	Wrinkle reduction emollient, moisturizing
	Z-Cote HP1	17	Zinc Oxide (and) Triethoxycaprylyl-silane	10.0	Inorganic UV-filter
D	Preservative			0.7	

*) supplier list page 22

Preparation:

1. Heat phase (A) and (B) separately to 70 °C
2. Add phase (B) to (A) and homogenize
3. Add phase (C) to (AB) and homogenize
4. Cool to 35 °C and add phase (D) to (ABC) and homogenize
5. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s-1):

~ 23,300 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Information:

Calculated SPF: 31.1 UVA/UVB Ratio: 0.73 Star Rating: ***
 UVA-PF/SPF [>0.33]: 0.37 Critical Wavelength: 375 nm

Transparent Sunscreen Pump Spray Without Ethanol (SPF 50)

Formulation No.: 12788

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Eusolex OCR	9	Octocrylene	10.0	UVB-filter
	Eusolex HMS	9	Homosalate	10.0	UVB-filter
	Eusolex 9020	9	Butyl Methoxydi-benzoylmethane	5.0	UVA-filter
	Tinosorb S	17	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine	3.5	UVA/UVB-filter
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	25.0	Wrinkle reduction, moisturizing emollient
	Lexfilm Sun	83	Polyester-7 (and) Neopentyl Glycol Diheptanoate	1.0	Film former, water resistance improver
	COSMACOL ETI	18	Di-C12-13 Alkyl Tartrate	5.0	Moisturizing emollient, sebum regulating
B	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	19.5	Keratolytic, moisturizer and sebum regulating emollient
	ISOFOL 18T	1	Octyldecanol	20.0	Medium spreading emollient
	D-Panthenol (w = 0.75)	4	Panthenol	1.0	Active care agent
	Tocopherol	4	Tocopherol	q.s.	Antioxidant
	Perfume "Orange"	27	Parfum (EU) / Fragrance (US)	q.s.	

*) supplier list page 22

Preparation:

1. Heat phase (A) to 50 °C and homogenize
2. Cool to room temperature
3. Add the components of phase (B) to (A) and homogenize

Spray pattern: fine dispensed droplets

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

liquid, yellow

Information:

Calculated SPF: 35.6

UVA-PF/SPF [>0.33]: 0.60

Star Rating: ****

Critical Wavelength: 375 nm



Aftersun Milk

Formulation No.: 11930

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	Demin. water		Aqua	add to 100	
	Glycerine		Glycerin	6.0	Moisturizing agent
	Disodium EDTA		Disodium EDTA	0.1	Chelating agent
	Keltrol CG T	5	Xanthan Gum	0.3	Thickening agent, hydrocolloid
B	CERALUTION H	1	See page 22	2.5	Emulsifier, reduces crow feet wrinkles, moisturizer
	NAFOL 1618 H	1	Cetearyl Alcohol	0.5	Co-emulsifier, consistency regulator
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	3.0	Wrinkle reduction, moisturizing emollient
	COSMACOL OE	1	Dicaprylyl Ether	5.0	Very light, good spreading emollient
	Jojoba oil	32	Simmondsia Chinensis (Jojoba) Seed Oil	2.0	Natural oil
	ISOFOL 16	1	Hexyldecanol	5.0	Medium spreading emollient
	Tocopheryl Acetate	4	Tocopheryl Acetate	q.s.	Active care agent
C	Demin. water		Aqua	20.0	
	D-Panthenol (w = 0.75)	4	Panthenol	1.0	Active care agent
	Aloe Vera gel		Aloe Barbadensis Leaf Juice	0.2	Active care agent
	NaOH (w = 0.1)		Sodium Hydroxide	0.3	Neutralizing agent
D	Ethanol (96%)		Alcohol denat.	6.0	Cooling agent, solubilizer
	Menthol		Menthol	0.1	Cooling agent
	Frescolat ML	6	Menthyl Lactate	0.5	Long lasting cooling agent
	Hydrolite 5	6	Pentylene Glycol	2.0	Emulsion stabilizer
E	Carbopol Ultrez 21 Polymer (w = 0.03)	30	Acrylates / C10-30 Alkyl Acrylate Crosspolymer	5.0	Thickening and stabilizing agent
	Preservative			q.s.	
	NaOH (w=0.10)		Sodium Hydroxide	q.s.	

*) supplier list page 22

Preparation:

1. Heat phase (A) and (B) separately to 70 °C
2. Add phase (B) to (A) and homogenize
3. Cool to 35 °C and add phase (C), (D), and (E) and homogenize
4. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s-1):

~ 7,000 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

milky

Self Tanning Lotion

Formulation No.: 12808

Phase	Trademark	*)	INCI name	Weight [%]	Function
A	CERALUTION CC	1	See page 22	5.0	Self-emulsifying concentrat, cold-processing possible
B	ISOFOL 16	1	Hexyldecanol	5.0	Medium spreading emollient
	COSMACOL EMI	18	Di-C12-13 Alkyl Malate	3.0	Wrinkle reduction, moisturizing emollient
	PARAFOL 12-97	1	Dodecane	5.0	Fast spreading emollient
C	Demin. water		Aqua	add to 100	
	Keltrol CG T	5	Xanthan Gum	0.5	Thickening agent, hydrocolloid
	Glycerine		Glycerin	2.0	Moisturizing agent
	Disodium EDTA		Disodium EDTA	0.1	Chelating agent
	Erythulose		Erythulose	1.5	Active agent
	Dihydroxyacetone	9	Dihydroxyacetone	5.0	Active agent
D	Simugel EG	70	Sodium Acrylate / Sodium Acryloyldimethyl Taurate (and) Isododecane (and) Polysorbate 80	2.0	Thickening and stabilizing agent
E	Preservative			q.s.	
	Perfume "Care"	27	Parfum (EU) / Fragrance (US)	0.05	
	Citric Acid		Citric acid	q.s.	pH-adjustment 4.0

*) supplier list page 22

Preparation:

1. Add phase (B) slowly to (A) at room temperature with turbulent stirring until the median particle size is < 0.40 µm. Please make sure that phase (B) is added slowly, otherwise local and irreversible phase inversion can occur.
2. Add phase (C) to (AB) and homogenize
3. Add phase (D) and (E) to (ABC) and homogenize
4. Adjust the pH-value

Viscosity (Haake, RheoStress 1, 1s⁻¹):

~ 17,000 mPas, 25 °C

Storage stability in terms of appearance:

Stable at room temperature, 40 °C and 50 °C for at least 3 months

Appearance:

liquid-viscous



Supplier List

1	Sasol Germany GmbH	27	drom fragrances GmbH & Co. KG
2	Sasol Wax GmbH	30	Lubrizol Advanced Materials BVBA
3	Evonik Industries AG	31	IOI Oleo GmbH
4	Alfa Aesar	32	Gustav Heess GmbH
5	CP Kelco	41	AkzoNobel N.V.
6	Symrise AG	55	Momentive Performance Materials Inc.
8	Clariant International Ltd.	70	SEPPIC S.A.
9	Merck KgaA	75	The Dow Chemical Company
17	BTC Europe GmbH	83	INOLEX Co.
18	Sasol Italy S.p.A.	84	Ashland Inc.

The guideline formulations have been compiled with great care. The information contained herein is, however, provided without prejudice and is intended to form the starting point for further discussion, review and trials before commercial utilization. SASOL cannot guarantee that the information provided is complete and without defects and that use of the information is adequate for the intended commercial use. No warranty is made for the reliability, the quality, the commercial utilization, the usefulness and the conformity with national health and safety regulations. SASOL further does not warrant that use of guideline formulations does not infringe third parties' rights or does not cause damages to third parties when incorrectly applied.

INCI Name List

CERALUTION H

INCI name:

Behenyl Alcohol (and) Glyceryl Stearate (and) Glyceryl Stearate Citrate (and) Disodium Ethylene Dicaprylate PEG-15 Disulfate

CERALUTION CC

INCI name:

Aqua (and) Caprylic / Capric Triglyceride (and) Glycerin (and) Cetearth-25 (and) Disodium Ethylene Dicaprylate PEG-15 Disulfate (and) Acacia Senegal Gum (and) Behenyl Alcohol (and) Glyceryl Stearate (and) Glyceryl Caprylate (and) Glyceryl Stearate Citrate (and) Phenoxyethanol (and) Xanthan Gum (and) Benzyl Alcohol (and) Potassium Sorbate (and) Tocopherol (and) Citric acid (and) Undecyl Alcohol

CERALUTION ES

INCI name:

Cetearth-25 (and) Disodium Ethylene Dicaprylate PEG-15 Disulfate

Sasol is a registered trademark of Sasol Ltd. Product trademarks displayed in this document are the property of the Sasol Group of companies, except where it is clear from the context that not. Users of this document are not permitted to use these trademarks without the prior written consent of their proprietor. All rights not expressly granted are reserved.

Disclaimer: The information contained in this document is based on Sasol's knowledge and experience at the time of its creation. We reserve the right to make any changes to this document or the products described therein, as a result of technological progress or developments. This information implies no liability or other legal responsibility on our part, including with regard to existing third-party patent rights. In particular, no guarantee or warranty of properties in the legal sense is implied. The customer is not exempted from the obligation to conduct careful inspection and testing of incoming goods. Reference to trademarks used by other companies is neither a recommendation, nor should it give the impression that products of other companies cannot be used. All our business transactions are governed exclusively by our General Business Conditions.



At Your Service



SASOL

Sasol Performance Chemicals

Organics Division

Anckelmannsplatz 1, 20537 Hamburg, Germany

info@de.sasol.com Telephone +49 40 63684-1000 Fax +49 40 63684-3700

Italy

sasol.italy@it.sasol.com

Telephone +39 025 8453-1

Fax +39 025 8453-285

Spain/Portugal

oliver.groeger@de.sasol.com

Telephone +34 934 676 902

Fax +34 934 876 485

United Kingdom

info.uk@sasol.com

Telephone +44 1564 78 3060

Fax +44 1564 78 4088

Benelux

valentina.modugno@it.sasol.com

Telephone +39 02 58453 228

France

jean-francois.petit@fr.sasol.com

Telephone +33 1 44 010-537

Fax +33 1 47 662-425

Poland/Baltic States

janusz.duda@pl.sasol.com

Telephone +48 22 860 6146

Fax +48 22 860 6148

Slovakia

sloveca.sk@sloveca.sk

Telephone +421 2 544 30 219

Fax +421 2 544 30 315

North America

peter.gerritsen@us.sasol.com

Telephone +1 832 763 0060

South America

alvanei.martins@us.sasol.com

Telephone +55 11 4612 8199

Middle East

abbas.haroon@sasol.com

Telephone +97 14 8086 300

Fax +97 14 8086 400

Pacific Region

jackson.ding@cn.sasol.com

Telephone +852 3971 5988

Fax + 852 2530 4660

P. R. China

liangbo.lu@cn.sasol.com

Telephone +86 21 221 80 500

Fax +86 21 221 80 506

Japan

yoshihiro.ito@jp.sasol.com

Telephone +81 (3) 3248 6711

Fax +81 (3) 3248 6715

Russia

anna.kogut@de.sasol.com

Telephone +7 495 221 5142 750

Fax +7 495 926 4807

www.sasol.com