

Starting point formulation – Sun protection cream O/W – boosted defense

This modern O/W sun protection formula combines powerful organic and mineral filters to deliver reliable broad-spectrum UVA and UVB defense. Lightweight, non-greasy emollients and moisturizing actives ensure a smooth skin feel and long-lasting hydration.

TIXOGEL-FTN provides excellent formulation stability and a pleasant sensory profile. **PURABYK-W 5560 BOOST** enhances the SPF performance, delivering a noticeable boost in protection and overall formulation efficiency.

Formulation

Position	Component	INCI	Supplier	Function	Dosage (%)
A	Tego Care PBS-6 (MB)	POLYGLYCERYL-6 STEARATE, POLYGLYCERYL-6 BEHENATE	Evonik	Emulsifier	3.00
	EUMULGIN SG	Sodium Stearoyl Glutamate	BASF	Emulsifier, O/W	1.00
	Tegin M Pellets	Glyceryl Stearate	Evonik	Consistency agent	0.50
	Tego Alkanol 1618 (MB)	Cetearyl Alcohol	Evonik	Consistency agent	0.75
	TIXOGEL-FTN	C12-C15 Alkyl Benzoate (and) Staeralkonium Bentonite (and) Propylene Carbonate	BYK	Rheological additive	5.00
	Parsol Shield	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (BEMT)	DSM (Nordmann)	UV-A & UV-B filter	5.00
	Parsol MCX	Ethyl Hexyl Methoxycinnanate	DSM (Nordmann)	UV-B filter	2.00
	Cosphaderm T 70 NON GMO ECO	Tocopherol, Helianthus Annuus Seed Oil	Cosphatec	Antioxidans	0.20
	Tegosoft DEC	Diethylhexyl Carbonate	Evonik	Emollient	5.50
Tegosoft XC	Phenoxyethyl Caprylate	Evonik	Emollient	4.00	
B	Demineralized Water	Aqua		Solvent	54.50
	Propandiol natural	Propandiol	Cosphatec	Moisturizing agent	2.00
	Pentavitin	Saccharide Isomerate	DSM (Nordmann)	Moisturizing agent	0.25
	Parsol MAX	Methylene Bis-Benzotriazolyl Tetramethylbutylphenol, Aqua, Decyl Glucoside, Propylene Glycol, Xanthan Gum	DSM (Nordmann)	Broad spectrum filter	5.00
	Chelating Agent	Sodium Phytate, Aqua, Alcohol	Dragonspice	Chelating agent	0.25
	Cosphaderm Dicapo natural	Caprylyl Glycol, Propanediol, Glyceryl Caprylate	Cosphatec	Multifunctional	0.80
C	Parfum oil Origins natural	Fragrance	Vögele	Parfum oil	0.25
D	PURABYK-W 5560 Boost	Hydrogenated Rapeseed Oil	BYK	Microwax	2.00
	Parsol ZX	Zinc Oxide (nano), Triethoxycaprylylsilane	DSM (Nordmann)	UV-A & UV-B filter mineral	7.00
E	Zitronensäure lsg. 10 %	Aqua, Citric Acid	Carl Roth	pH-Regulator	1.00
Total					100.00

Instructions (manufacturing procedure)

- Add materials of phase A into a beaker.
- Add materials of phase B into an other beaker.
- Heat both phases up to their need temperature (phase B 75–80 °C) and (phase A 85 °C).
- Transfer phase A slowly into phase B while stirring (wingstirrer, 500 rpm).
- Stir for 2 min longer (wingstirrer, 500 rpm).
- Homogenize with IKA Ultra Turrax for 30 sec., 8,000 rpm.
- Cool down to < 40 °C while stirring (wingstirrer, 500 rpm).
- One after the other add the materials of phase C while stirring (wingstirrer, 500 rpm).
- Add phase D while stirring until it is finely dispersed (wingstirrer, 500 rpm, 10 min).
- Homogenize once again. 30 sec., 8,000 rpm.
- Cool down to room temperature while stirring.
- Adjust the pH-value to 6.0–6.5 with phase E. Control the pH-value again after 24 h and adjust it if necessary to 6.0–6.5 once more.

Characteristic data

- Appearance: slightly yellow emulsion.
- Storage stability: 3 months at 40 °C.

TIXOGEL-FTN is a rheological additive based on natural bentonite. It thickens the oil phase, stabilizes the formulation and provides a very pleasant skin feel.

PURABYK-W 5560 Boost is based on micronized rapeseed wax and enhances water resistance and SPF.



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