

O/W PEG-free Sprayable Sun Lotion cold processing

Formulation Idea:

- sprayable lotion with good skin feeling, non tacky, without whitening effect
- emulsifier Sympatens-O/4200
- PEG-free formulation
- cold or warm processing
- high sun protection factor (in-vitro SPF : 27.5-33.3) (Diffey & Robson -1989)
- UVA protection „superior“ (Boots Star Rating System)

Guide Formulation:

RFK-02-044

Phase	Ingredient	INCI	% Wt.
A	Sympatens-O/4200	Sorbitan Laurate (and) Polyglyceryl-10 Laurate	2.50
	Sympatens-LBZ	C12-15 Alkyl Benzoate	7.00
	Sympatens-ES	Octyl Stearate	8.00
	DC 200 fluid, 100cs (1)	Dimethicone	1.00
	Isohexadecane (2)	Isohexadecane	2.00
	Neo Heliopan AV (3)	Octyl Methoxycinnamate	5.00
B	Water	Aqua	40.00
	Ultrez 10 (4)	Carbomer	0.15
	Keltrol RD (5)	Xanthan Gum	0.15
C	Water	Aqua	to 100
	Neo Heliopan Hydro (3)	Phenylbenzimidazole Sulfonic Acid	5.00
D	Glycerol	Glycerin	3.00
	Tinosorb M (6)	Methylene Bis-Benzotriazolyl Tetramethylbutylphenol *	8.00
E	TEA 99%	Triethanolamine	to pH 6.5-7.0
F	D,L-a-Tocopheryl Acetate (7)	Tocopheryl Acetate	0.30
	Perfume oil (8)	Parfum	q.s.
	Preservative		q.s.

(1) Dow Corning, (2) Lanxess, (3) Symrise, (4) B.F. Goodrich, (5) Kelco, (6) Ciba Specialities, (7) Roche, (8) Luzi

* (and) Aqua (and) Propylene Glycol (and) Decyl Glucoside (and) Xanthan Gum

Manufacture:

- mix phases A, B and D separately to obtain homogeneous phases
- add phase E to phase C whilst stirring to obtain a clear phase : Neo Heliopan Hydro is neutralized
- add phase CE to phase D whilst stirring; then add phase CDE to phase B whilst stirring
- add phase A to phase BCDE whilst stirring and homogenize for 2 minutes
- add phase F whilst stirring

Assessment:

- white emulsion, sprayable, non-tacky, without whitening effect
- stability in cold and heat as proven in freeze-thaw cycles
- mono-disperse distribution of emulsified droplets, mean droplet size approx. 1.7 µm

RFK-02-044/0304/moe

This information is based on our current knowledge and is only meant to indicate general notes of our products and their possible uses. It does not constitute a warranty and the customer should satisfy itself of the suitability of the content for its own particular purpose. Health and Safety advice on the products is given in the individual product safety datasheets, available on request.

Sympatens, Kotilen and Kosteran are Trade Marks of Dr. W. Kolb AG.