

ALPICARE D 3

Naturally powerful dispersant.

Consumers are now conscious about the impact on the environment of their habits. The personal care market is therefore quickly moving towards more natural and sustainable products. Attention to the marine environment and coral reefs, as well as concerns over organic filters, for example, are making the industry move to inorganic sunscreens. Hence, formulators need to increase mineral oxide load while minimising skin whitening. A high content of powders and pigments characterises also colour cosmetics, where stability and pleasant textures are desired, with no alterations to colour results.

ALPICARE D 3 is a natural polymer with highly effective dispersing properties for inorganic pigments and powders, as well as physical sunscreens such as titanium dioxide and zinc oxide, or hydroxyapatite.

Powder loading in formulations can be easily increased, with improved stability and lower viscosity, by adding small amounts of ALPICARE D 3.

Additional benefits include a potentially higher SPF, delivered through a more even application, and improved transparency in sun care products with physical UV filters.

In colour cosmetic applications, colour coverage and colour intensity can be potentially improved through the addition of ALPICARE D 3.

Applications

ALPICARE D 3 is particularly suited for applications where a high powder content is required, such as:

Skin and sun care:

- Sunscreens and moisturisers
- Barrier creams and baby products

Colour cosmetics:

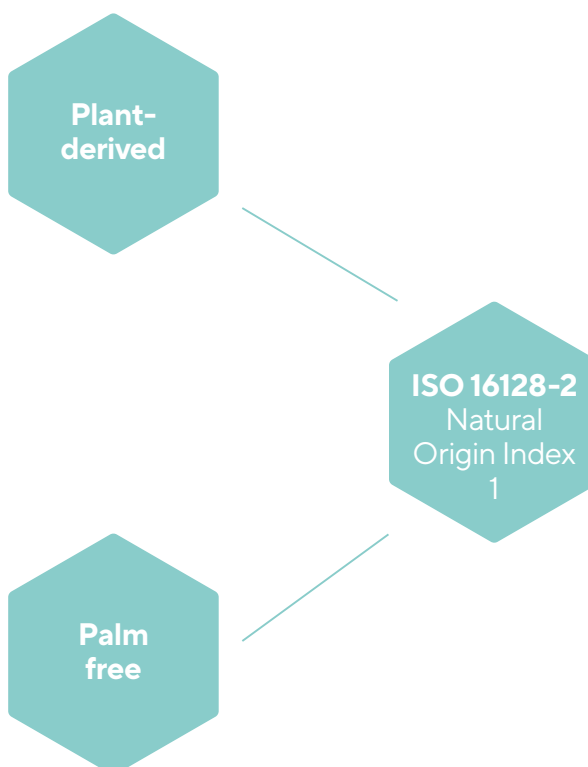
- Lips: lipsticks, lip glosses
- Eyes: eye liners, mascaras, make-up pencils
- Face: foundations, tinted moisturisers, cover-up sticks, cream blushers

Summary of benefits

Combining high performance and sustainability, ALPICARE D 3 can be a valuable partner in formulating, delivering:

- Formulation naturality
- Increased powder loading
- Lower viscosity and higher stability of dispersions
- Powder agglomeration prevention
- Potentially higher SPF and improved transparency, with a more even application
- Potentially improved colour coverage and intensity

INCI name: Polyhydroxystearic Acid



BABY PROTECTIVE CREAM LAMCOS 223

Phase	Ingredient name	% w/w
A		
1	Aqua (Water)	To 100
2	Disodium EDTA	0.05
3	Glycerin	3.0
4	ESAFLO® HM 22	0.2
5	Citric Acid, 10% soln.	To pH ~ 5.5
B		
1	Isononyl Isononanoate	5.0
2	Butyrospermum Parkii (Shea) Butter	1.0
3	Zinc Oxide	20.0
4	TEWAX TC 65	3.0
5	ALPICARE D 3	0.2
C		
1	VISCOLAM® AT 100 P	2.0
D		
1	Preservative	q.s.
2	Parfum (Fragrance)	q.s.
3	Citric Acid, 10% soln.	To pH ~ 5.5

General Characteristics:

Appearance: thick off-white emulsion
pH: ~ 5.5
Viscosity (Brookfield RVT, T-bar spindle + Helipath, 10 rpm, 25°C, 30''): ~ 65000 mPa.s

Formulation tips

- ALPICARE D 3 should be warmed and stirred before use to ensure a homogeneous product.
- ALPICARE D 3 should be dissolved in the carrier phase (oil phase) before adding powders and solids.
- The dose rate needs to be optimisation for each solid or pigment type. An easy way to do so is a dispersant demand curve. Final optimisation of dispersant dose must be carried out by milling dispersions on equipment that represents production.

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SUNSCREEN with TiO2 and ZnO LAMCOS 226

Phase	Ingredient name	% w/w
A		
1	Titanium Dioxide, Silica, Dimethicone	8.0
2	Zinc Oxide, Triethoxycaprylsilane	8.0
3	ALPICARE D 3	1.6
4	PEG-10 Dimethicone	3.0
5	Lauryl PEG-10, Tris(trimethylsiloxy)silylethyl Dimethicone	0.1
6	C12-C15 Alkyl Benzoate	4.5
7	Isopropyl Palmitate	2.6
B		
1	Cyclopentasiloxane	12.0
2	Synthetic Wax	0.5
C		
1	Aqua (Water)	To 100%
2	Sodium Chloride	1.0
3	Glycerin	2.0
4	Preservative	0.8

General Characteristics:

Appearance: off-white emulsion
Viscosity (Brookfield RVDC-E, RV6, 30 rpm, 25°C, 3''): ~ 16000 mPa.s

IRON OXIDE DISPERSION LAMCOS 227

Phase	Ingredient name	% w/w
A		
1	Titanium dioxide, Alumina, Triethoxycaprylsilane	8.7
2	Iron Oxide-Yellow	1.0
3	Iron Oxide-Red	0.2
4	Iron Oxide-Black	0.1
5	Cyclopentasiloxane	10.0
6	ALPICARE D 3	1.0
B		
1	Lauryl PEG-10 Tris(trimethylsiloxy)silylethyl Dimethicone	5.0
2	Caprylic/Capric Triglyceride	3.0
3	C12-C15 Alkyl Benzoate	5.0
C		
1	Sodium Chloride	0.5
2	Butylene Glycol	8.0
3	Aqua (Water)	To 100%
D		
1	Preservative	q.s.

General Characteristics:

Appearance: coloured, beige emulsion
Viscosity (Brookfield RVDC-E, RV5, 60 rpm, 25°C, 3''): ~ 3000 mPa.s