

Application Sheet

Creasperse® UV-products are ready-to-use predispersed mineral UV-filters. They are compositions of nanofine Titanium Dioxide, Zinc Oxide or Iron Oxide dispersed in photostable lipids. Creasperse® UVs have maximum concentrations of solids, hence it is easy to obtain high SPFs. Creasperse® UVs offer reliable and consistent UV-protection. The UV-pigments are dispersed in such way, that they distribute evenly and offer maximum capacity of UV-screening.

Creasperse® TiO₂ dispersions are very photostable and available in different crystal sizes for different kinds of applications. This variety of crystal sizes along with the choice of Zinc Oxide and Iron Oxide brings flexibility to formulating. Standard grades of Creasperse® UV-dispersions are based on Hydrogenated Polydecene and Vegetable Squalane.

Trade Name	INCI Name
Creasperse® TR 14 AF 50	Titanium Dioxide (and) Hydrogenated Polydecene (and) Hydroxystearic Acid
Creasperse® TR 14 VS 50	Titanium Dioxide (and) Vegetable Squalane (and) Hydroxystearic Acid
Creasperse® TR 22 AF 65	Titanium Dioxide (and) Hydrogenated Polydecene (and) Hydroxystearic Acid
Creasperse® TR 22 VS 50	Titanium Dioxide (and) Vegetable Squalane (and) Hydroxystearic Acid
Creasperse® TR 35 AF 65	Titanium Dioxide (and) Hydrogenated Polydecene (and) Hydroxystearic Acid
Creasperse® TR 35 VS 65	Titanium Dioxide (and) Vegetable Squalane (and) Hydroxystearic Acid
Creasperse® Zn 40 AF 50	Zinc Oxide (and) Hydrogenated Polydecene (and) Hydroxystearic Acid
Creasperse® Zn 40 VS 50	Zinc Oxide (and) Vegetable Squalane (and) Hydroxystearic Acid
Creasperse® Fe 3 AF 25	Hydrogenated Polydecene (and) Iron Oxides (and) Hydroxystearic Acid

In addition to standard products, Creasperse® UV-products can be made with a vehicle of your choice.

Product	UV-filter	Concentration	Crystal Size	Properties
Creasperse® TR 14 AF 50	TiO ₂ , rutile	50%	14 nm	High SPF, low UVA
Creasperse® TR 14 VS 50	TiO ₂ , rutile	50%	14 nm	Transparent application
Creasperse® TR 22 AF 65	TiO ₂ , rutile	65%	22 nm	High SPF, medium UVA
Creasperse® TR 22 VS 50	TiO ₂ , rutile	50%	22 nm	Slightly opaque application
Creasperse® TR 35 AF 65	TiO ₂ , rutile	65%	35 nm	Medium SPF, high UVA
Creasperse® TR 35 VS 65	TiO ₂ , rutile	65%	35 nm	Opaque application
Creasperse® Zn 40 AF 50	ZnO	50%	40 nm	Low SPF, high UVA
Creasperse® Zn 40 VS 50	ZnO	50%	40 nm	Transparent application
Creasperse® Fe 3 AF 25	Fe ₂ O ₃	25%	3 nm	No SPF

Benefits

- high SPF
- high UVA/UVB-protection
- no skin penetration
- soft skin feel without tackiness
- choice of application from transparent to slight opacity
- high water resistance
- low use level offering high UV-protection

Properties

- hydrophobic
- photostable and inert
- excellent heat stability
- high concentration of solids
- emulsion compatible structure
- compatible with organic UV-filters
- pumpable



Application Areas

Skin Care

Creasperse® UV-dispersions are ideal for skin care products as it is possible to obtain transparent products with a soft and elegant feel. Creasperse® UV-dispersions are especially suitable for anti-age products since the range includes dispersions, which provide high UVA-protection. In addition to transparent formulations, the range also includes dispersions suitable for formulating products with a natural looking whitening effect, while providing high UV-protection.

Sun Care

Creasperse® UV-dispersions provide options to create sun care products with different properties such as high SPF, high UVA-protection and transparent formulations. Creasperse® UV-dispersions with 14 nm TiO₂ crystals provide high SPF with low UVA-protection and very transparent application. Creasperse® UV-dispersions with 22 nm TiO₂ crystals offer high SPF and medium UVA-protection with a slight whitening effect. Creasperse® UV-dispersions with 35 nm TiO₂ crystals provide excellent UVA-protection, but only moderate SPF with fairly opaque application.

Creasperse® UV-products based on ZnO also provide UVA-protection with only moderate SPF, but with a transparent application.

Creasperse® Fe 3 AF 25 product does not offer significant UV-protection but it is used in sun care products to tone the whiteness of Titanium Dioxide towards a more natural skin-like tone. It is based on a specific nanofine Iron Oxide, which has a translucent application without coverage unlike traditional Iron Oxides.

Colour Care

In colour care applications Creasperse® UV-dispersions are mainly used in foundations, lipsticks and lip glosses to provide SPF with high UVA-protection. Creasperse® UV-dispersions with 22 nm TiO₂ crystals and dispersions with ZnO offer UV-protection without interfering with colour shading. Creasperse® UV-dispersions with 35 nm TiO₂ crystals offer also UV-protection, but they bring whiteness to the formulation.

Formulating

Creasperse® UV-dispersions can be used in all types of emulsions and in anhydrous systems.

Emulsions

Creasperse® UV-dispersions are added into emulsions after the emulsification process. Before the addition of Creasperse® UV-dispersions, the emulsion needs to be cooled down to below 40°C. The emulsion with Creasperse® UV-dispersions should be homogenized so that the Creasperse® UV-dispersions will disperse into the emulsion and migrate further into the emulsion structure. If Creasperse UV-dispersions are added to the oil phase before emulsification, they may interfere with the formation of the emulsion. Same applies if it is added to the emulsion before it has cooled down to below 40°C.

Typical use level: 5-15%

Anhydrous Systems

In anhydrous systems, the ingredients can be mixed together in hot or cold processes.

Typical use level: 5-15%

We offer SPF in vitro testing free of charge for our customers when formulating with Creasperse® UV-dispersions.

Packaging: 25kg and 50kg open-head drums