

Technical
Specification.



enhanceU-T-warm

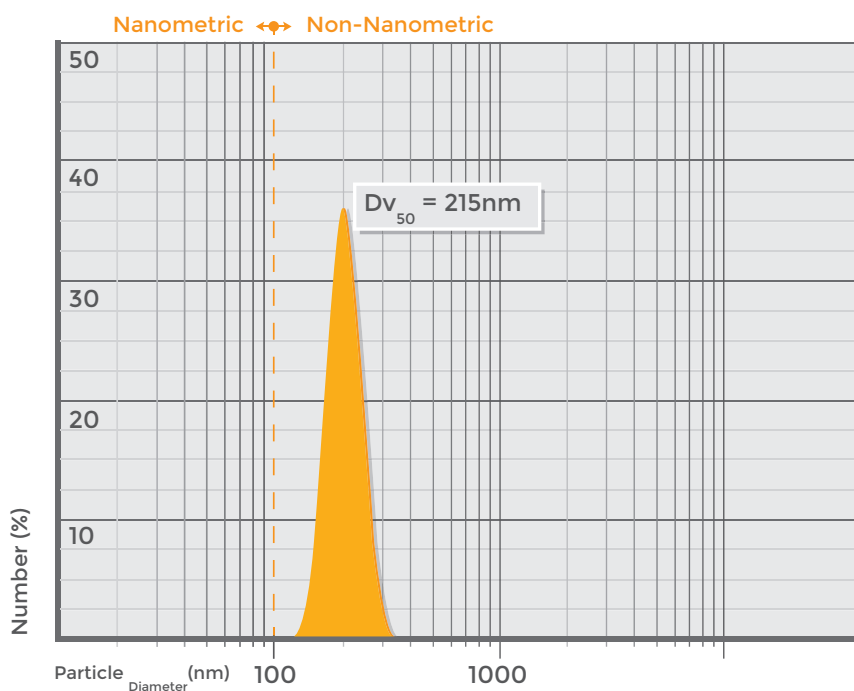
ENHANCEU-T-WARM, A NON-NANOMETRIC INORGANIC SUNSCREEN WITH COLOR

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ADParticles has developed EnhanceU-T-warm, an inorganic composite with properties suitable for use as UV filter with color in cosmetic. The particle-size distribution of EnhanceU-T-warm is not in the nanometer range (1-100 nm) and it provides a high level of UVA and UVB protection.

EnhanceU-T-warm consists of a composite of TiO_2 , SiO_2 and mineral pigments developed by ADParticles patented technology, providing broadband UV protection and offering safety, efficacy and color to the final formula.

The particle size distribution was determined by Nanoparticle Tracking Analysis (NTA) a characterization technique that utilizes the properties of both light scattering and Brownian motion in order to obtain the particle number size distribution of samples.



COMPOSITION

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INCI:

- Titanium Dioxide
- Silica
- CI-77491
- CI-77492
- CI-77499

TiO₂ Content	75-77%
SiO₂ Content	3-5%
FeO/Fe₂O₃/FeO.OH(CI-77491,CI-77492,CI-77499) Content	20%
As % (m)	< 0.0001
Sb % (m)	< 0.0002
Pb % (m)	< 0.001
Hg % (m)	< 0.0001

UV ABSORPTION SPECTRUM. PHOTOSTABILITY

UV ABSORPTION SPECTRUM. PHOTOSTABILITY

- SPF: 9
- UVA PF: 6
- UVAPF/SPF Ratio : 0,6
- UVA/UVB Ratio: 0,7
- Critical wavelength: 386 nm

The analysis was performed with a **Sun simulator Solar Oriel 300W** with a Xenon lamp (Newport, Cleveland, USA).

The filter concentration in the final formula was **5% (w/w)**.

Melt the ingredients of the fatty **Phase 1** and heat to 80-85°C until completely solubilized.

Heat **Phase 2** and add EnhanceU-T-warm. Heat to 80-85°C while stirring.

Add **Phase 1** into **Phase 2** while stirring.

Cool to 50°C while stirring, add Benzyl Alcohol and complete cooling.

Ingredients	Ingredients (%wt)
EnhanceU-T-warm	5.0
Phase 1	
Lanoline	4.8
Cocoa Butter	2.1
Glyceryl Stearate	3.2
Stearic Acid	2.1
Phase 2	
Water	75.9
Sorbitol	5.3
Triethanolamine	1.1
Phase 3	
Benzyl Alcohol	0.5



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