

Technical  
Specification.



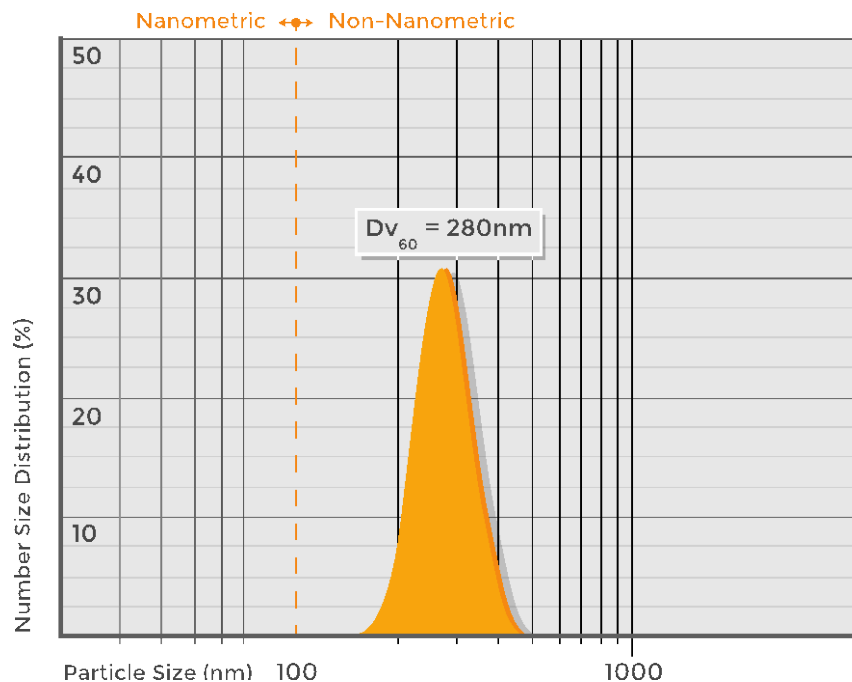
## ENHANCEU-S, A NON-NANOMETRIC INORGANIC SUNSCREEN

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

EnhanceU-S consists of a composite of ZnO, TiO<sub>2</sub> and SiO<sub>2</sub>, developed by ADParticles patented technology, providing broad band UV protection and offering safety and efficacy 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:

- Zinc Oxide
- Titanium Dioxide
- Silica

<b>TiO<sub>2</sub> Content</b>		22-25%
	As % (m)	< 0.0001
	Sb % (m)	< 0.0002
	Pb % (m)	< 0.001
	Hg % (m)	< 0.0001
<b>SiO<sub>2</sub> Content</b>		4-6%
<b>ZnO Content</b>		68-72%

## UV ABSORPTION SPECTRUM. PHOTOSTABILITY

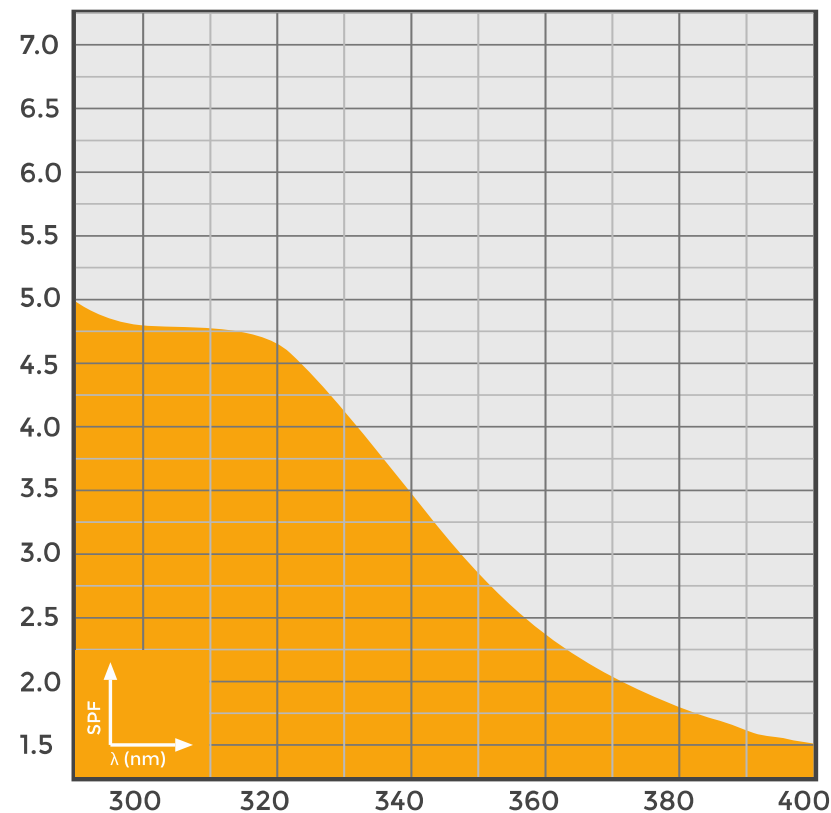
## UV ABSORPTION SPECTRUM. PHOTOSTABILITY

- SPF: 4,3
- UVA PF: 3,0
- Ratio UVAI/UV: 0,8
- Ratio UVA/UVB: 0,7
- Critical wavelength: 384 nm

The analysis was performed with a spectrophotometer equipped with a **WC Xenon lamp of 125W** operating at **75W (SPF-290S Analyzer System)**.

The filter concentration in the final formula was **2% (w/w)**

Photostability test was performed to evaluate the **SPF** both before and after irradiation of the sample with UV light, after **11 irradiation sessions of 1 minute**. The photostability value is higher than **80%**, the refore **EnhanceU-S is considered to be photostable** (Garolietal. J. Dermatol. Sci. 52 (3), 193-204).





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