

Technical
Specification

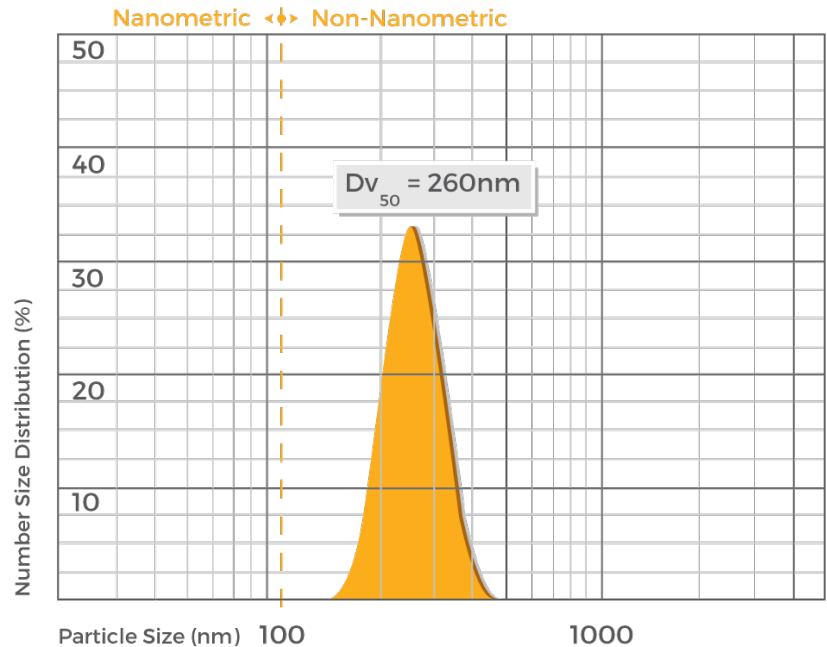


ENHANCEU-S, A NON-NANOMETRIC INORGANIC SUNSCREEN

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 (1-100nm) and it provides a high level of UVA and UVB protection.

EnhanceU-S consists of a composite of ZnO, TiO₂ and SiO₂, 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

INCI:

- Zinc Oxide
- Titanium Dioxide
- Silica

ZnO content	68-72 %	
TiO ₂ content	22-25 %	
SiO ₂ content	4-6 %	
	As (ppm)	≤ 3
	Sb (ppm)	≤ 20
	Pb (ppm)	≤ 10
	Hg (ppm)	≤ 1

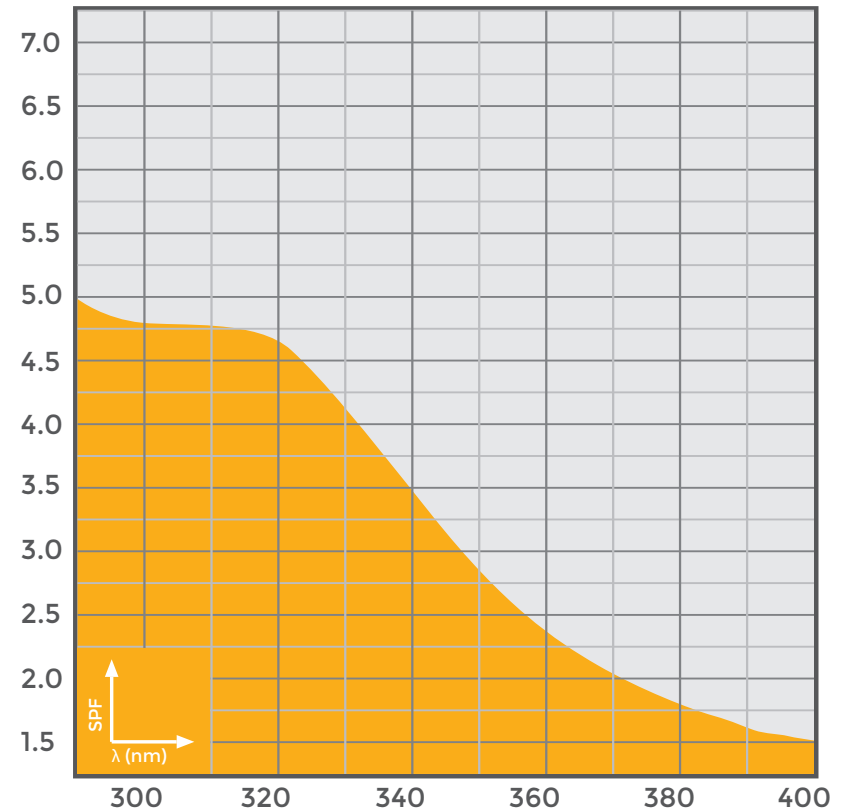
UV ABSORPTION SPECTRUM. PHOTOSTABILITY

- SPF: 4,3
- UVA PF: 3,0
- UVA/UVB Ratio: 0,7
- UVAI/UV Ratio: 0,8
- 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%**, therefore **EnhanceU-S** is considered to be **photostable** (Garolietal. J. Dermatol. Sci. 52 (3), 193-204).





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