

Technical
Specification

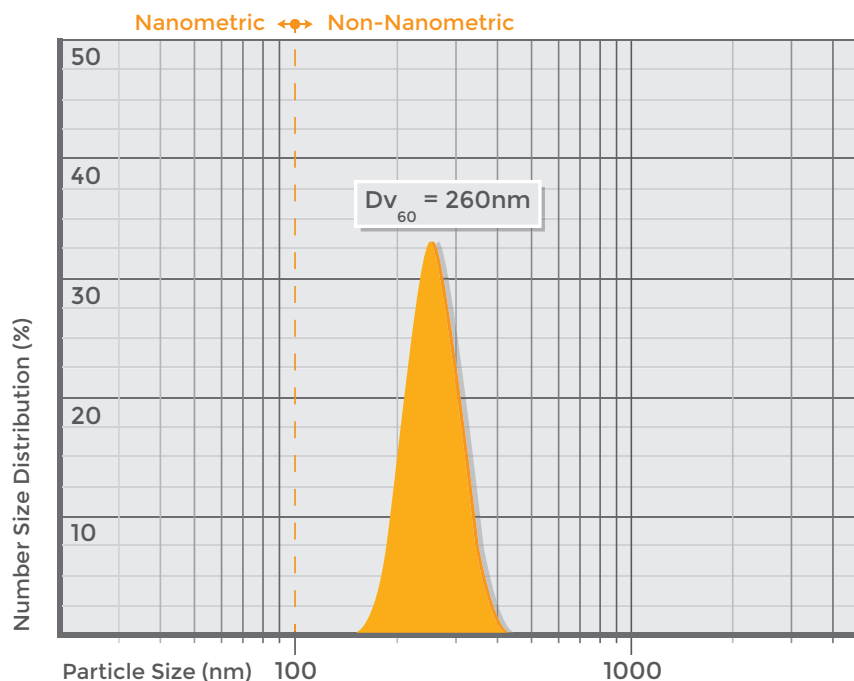


ENHANCEU-T, A NON-NANOMETRIC INORGANIC SUNSCREEN

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

EnhanceU-T consists of a composite of TiO_2 and SiO_2 , developed by ADParticles patented technology, providing broadband 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:

- Titanium Dioxide
- Silica

TiO ₂ content		94-96 %
SiO ₂ content		4-6 %
	As (ppm)	≤ 3
	Sb (ppm)	≤ 20
	Pb (ppm)	≤ 10
	Hg (ppm)	≤ 1

UV ABSORPTION SPECTRUM. PHOTOSTABILITY

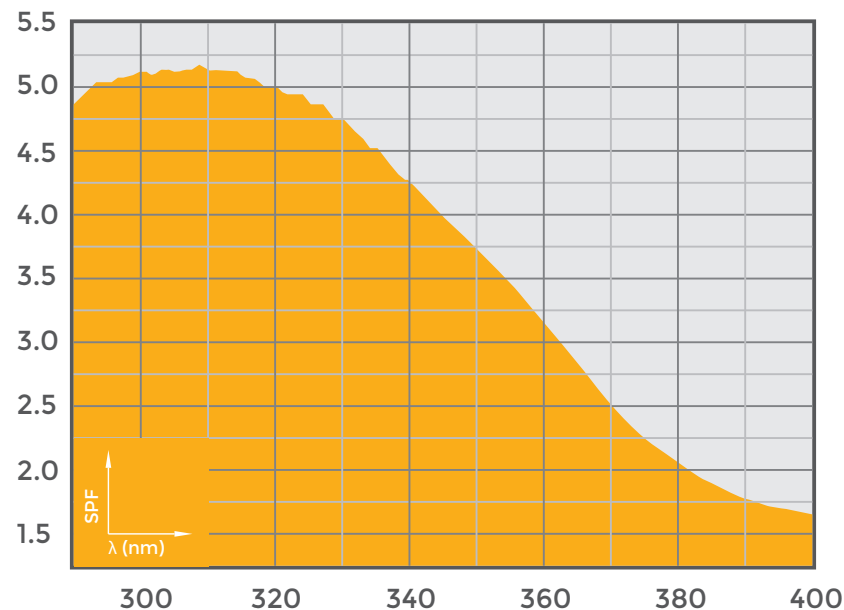
- **SPF:** 7,2
- **UVA PF:** 4,3
- **UVAPF/SPF Ratio:** 0,6
- **UVA/UVB Ratio:** 0,7
- **Critical wavelength:** 383 nm

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)**

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-T is considered to be photostable** (Garolietal. J. Dermatol. Sci. 52 (3), 193-204).





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