



Absolute Black: Matrix Polymer for Industrial Design

Thanks to research activities performed by Grado Zero Espace on the integration of nanoparticles into different matrices, a new series of prototypes characterized by particular aesthetic effects has been developed.

This job gave birth to "Absolute Black" brand, a process that allows to obtain various polymeric materials, containing variable percentages of Carbon Nanotubes (CNTs) and other micro sized fillers, able to absorb very well all the visible spectrum radiations.

Our eyes are able to perceive only a small portion of the electromagnetic spectrum between 700nm (red) and 400nm (violet) called visible light.

Sunlight is white because composed by an overlapping of all the frequencies of the electromagnetic spectrum; while black is defined a material able to absorb completely all the visible radiations, without reflecting anyone.

The results, obtained by a proper dispersion of this black pigment into a polymeric matrix using suitable techniques to guarantee the greatest homogeneity and stability, was an article able to absorb very well all the visible radiations with an excellent aesthetic effect.

Besides, bulk dispersion allows a good workability of the final product simplifying the treatments post abrasion and permitting to customize brightness and opacity effects according with the chosen application.

Absolute Black is black inside and outside and, also after its scratching, it maintains its homogeneous black colour.

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