

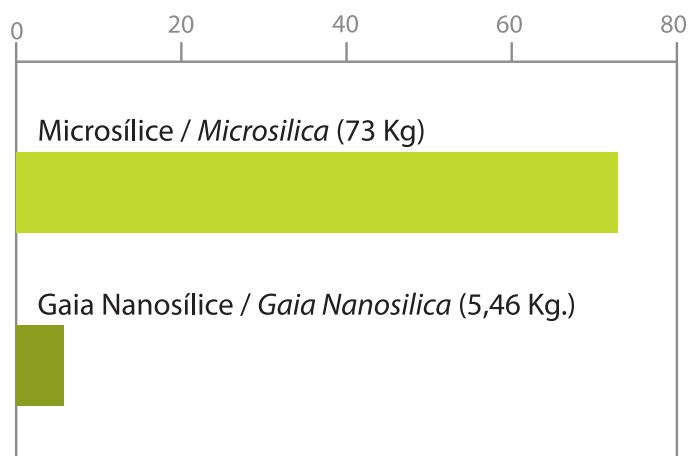
Nanotechnology Applied to New Construction Materials.

Roclano has obtained the distribution in **Spain** and **Portugal** of products based on nanotechnology, made by the company “**Industria Ulmen Europa S.L.**”.

The products in the range “**Gaia Nano-Silica**” have been developed to respect the environment, workers’ health, and to improve the safety of the concrete, obtaining an improved and more economic product when compared to micro-silica.

Gaia Nano-Silica was the first nano-product to replace micro silica. Later, new products were developed based on Gaia Nano-Silica (additives for technical, high resistance concrete) like **Aska 926** (additive for self-compacting concretes) and **Gaia Shotcrete** (for projected concrete).

Gaia has exceeded all expectations, giving the concrete *high initial and final resistance, as well as increased plasticity, increased impermeability, a reduction in final works cost, savings in cement of up to 40% and an important reduction of environmental pollution.*



Material necesario para obtener un hormigón H-70 (Kg)
Material needed to obtain H-70 concrete (kg)

Comparación entre hormigón H-70 común y hormigón H-70 con Gaia

Material Material	Hormigón H-70 Común Concrete H-70 common	Hormigón H-70 Común Concrete H-70 common
Cemento Concrete	460 Kg	420 Kg
Plastificante común Common plasticizer	2,7 Kg	2,7 Kg
Superplastificante Superplasticizer	9 Kg	--
Microsilice (silica fume) Microsilica (silica fume)	24 Kg	--
Gaia Nanosilice Gaia Nanosilica	--	5,46 Kg
Total	495,7 Kg	428,2 Kg