

Glontech's Nanotechnology Applications

Stephanos Nitodas

Glontech S.A. Lamia's Industrial Area ETVA VI.PE. Lamia, Fthiotis

***Corresponding author:** Dr. Stephanos Nitodas, Glontech S.A. Lamia's Industrial Area ETVA VI.PE. Lamia, Fthiotis Greece 35100; Tel: +302118000980; E mail: snitodas@glontech.com

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Glontech SA, member of ONEX Technology Group, is a nanotechnology company offering nanoscience and nanotechnology solutions, products & services to global product manufacturers. It is a global leader in production of advanced materials & applications of multi-wall carbon nanotubes (MWCNTs), as well as in the development of intermediate MWCNTs products for polymer composites and plastics, which can be applied to various industrial fields, such as coatings, electronics, tires, and sports accessories.

Our MWCNTs offer a range of competitive advantages, especially with respect to mechanical, thermal and electrical properties improvements in composites. More specifically, at small weight percentages (0.5% w/w), MWCNTs increase the Young's modulus of typical thermoplastics (e.g. PP) by 50% whereas in the case of resins (e.g. epoxy) the enhancement is even more striking, exceeding 100%. In terms of elongation, improvements of more than 138% can be achieved in epoxy and silicone resins when MWCNTs are added at weight concentrations below 1%. The enhancement in mechanical properties of our MWCNTs-polymer nanocomposites becomes more conspicuous after aging (e.g. 1 year) as the nanotube-reinforced composites retain their original values while those of the pristine polymers are dramatically reduced.

Glontech is leading various European Research & Development programs and offers turn-key solutions in a win-to-win basis to a lot of leading industries worldwide. Besides the aforementioned sectors, future applications of Glontech's materials encompass the utilization of MWCNTs in energy storage, batteries and water purification. The company through investments in R&D in the last years has become one of the three top companies producing carbon nanotubes on an industrial scale in Europe. Glontech has its own production unit in Greece, while part of its research



Figure 1: Glontech's NC52 product

and development activities is located in the Technological Park of NCSR Demokritos.

Glontech has recently developed NC52 (Figure 1), which is a revolutionary carbon-based sorbent material that absorbs fast and efficiently oil products from water. Unlike dispersants, solidifiers and other enzyme-based oil spill treatment methods, our product works with all kind of oil products and by-products (heavy and light oil, crude oil, lubricants, etc.), has no environmental side-effects and can be regenerated and reused several times without any degradation of its sorption capability.

Last November, the company participated for the second time to the finals of the CleanTech Open Global Ideas Competition in Silicon Valley and was selected as one of the 5 best green technologies globally with NC52, the innovative product for oil spills cleaning, addressed to oil & gas companies, needing to improve the oil spills clean-up procedure in an environmentally friendly and cost effective way (Figure 2).

Watch the video by Glontech SA. NC52: The Pioneering Product for Oil Spill Cleaning!

<https://www.youtube.com/watch?v=zp0BJseOPW8>

Sales requests & ordering: sales@glontech.com

