

Mixing "nano"s: nanotubes, nanofibres, nanoceramics...

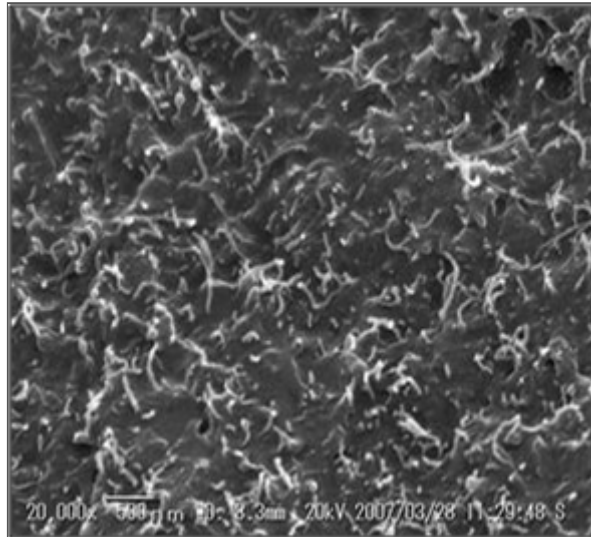
In the arena of high technology and high performance materials the uniform dispersal of nano-sized particles in materials such as resin is extremely difficult work. Traditional methods have significant problems – consequently we are pleased to announce a solution in the form of the **THINKY ARV-310 Mixer**.

The **ARV-310** and its larger capacity sibling the **ARV-5000** both utilise proven Thinky planetary mixing technology with the added advantage of a vacuum environment. Their powerful acceleration enables uniform mixing as well as simultaneous dispersion and de-aerating for highly active nano-sized particles such as carbon nanotubes (CNT) or particles in epoxy or silicone, nano-ceramic in water, nanofibers in polymer, nanogold balls, yag phosphor in silicone, or for organic materials.

The Thinky ARV units are addressing the really difficult mixing problems in laboratories around the world. Their bi-directional action does not enfold air while the new vacuum environment facility removes existing air or other gases. A good example is CNT dispersion in epoxy, where compared to hand mixing the Thinky process leads to better than halving resistivity in the final material. This is a technology especially suited to small/medium laboratory type quantities.

The Thinky planetary mixing process is considered ideal for nano-polymers, ultra-fine semiconductor elements, molecular devices, biogenic materials, protein solar batteries, organic ELs, intelligent ceramics, functional materials, materials for high-technology electronic devices, carbon nanotubes, nano-carbon black, nano-composite, etc.

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CNT dispersion in a viscous epoxy – SEM image (x20,000)

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