# Powder coatings: Why still a niche?

ECJ editor Kirsten Wrede ponders why powder coatings are still a niche market

**Why are powder coatings still a niche market? I can't understand why we don't hear anything at all about breakthrough technologies in this coatings segment. This silence is a mystery to me, because powder coatings obviously have a lot of benefits, especially when it comes to the environment. True, there are still significant obstacles – smooth thin films are hard to apply and colour changes take longer than with liquid paints – but I believe that the environmental benefits speak for themselves. For instance, powder coatings can do without any organic solvents, to name just one. Isn't that reason enough to put more effort into advancing this technology? Let's see what industry has to say:**

*Stephen Jewitt, Coatingenius:*

"In the 1990s everyone invested in what was seen as the ultimate VOC solution. The result: serious overcapacity in powder production, with prices falling through the floor. It has been that way ever since. Some producers prospered by focusing on niche specialties, but for the most part the entire supply chain has suffered ever since. With no profits being made, no-one has invested in new R&D. Most of the main players, I fear, have cut their spending completely, especially in Europe where business has been more or less in crisis. Hence, no new breakthroughs in technology. Dow have announced that they are putting their epoxy business up for sale. Momentive have shut one solid resins plant. Huntsman, too, have closed European and Asian plants. Anyway, much of the volume has shifted to Asia."

*Joachim Schulze, Schlenk-Metallic Pigments*

"There have been great developments on the powder coatings sector in the last 10 years especially. I'm talking here of UV technology and technical advances, such as improvements in application equipment that are generally leading to faster colour changes, better charge control, more uniform stoving conditions and the like. Of course, there is still potential for improving levelling properties – but it can only be realised through close cooperation between powder coatings producers, raw materials suppliers and coaters."

*Ulrich Poth, consultant to the coatings industry*

"Powder coatings only yield an acceptably smooth surface when applied in thick layers, i.e. only then will they flow properly. Various attempts to use powder coatings of smaller particle size as a way of improving the results of thin layers are not living up to expectations. The costs of powder coatings – per unit area coated – are much higher on account of both the higher coating thickness and the higher product costs. Special equipment is needed to apply powder coatings. Many paint processors are loath to carry out the necessary retrofitting to their coating lines because of the costs involved. Higher softening temperatures are needed for producing and storing powder coatings. That restricts the choice of building blocks for the binders used in the powder coatings. And because higher softening temperatures needed for processing, powder coatings require higher stoving temperatures. Effect paints cannot be created with powder coatings. Up to now, the only way to meet many of the specified ecological requirements was to use high-solids paints. But further-reaching requirements are bound to come. As not all these restrictions apply to waterborne coatings, the assumption is that they will be more widely adopted in the future than powder coatings."

**Share your opinion on Kirsten Wrede's powder coatings blog at: www.european-coatings.com/Blog**

Source: Tony Burns - AkzoNobel