



Powder Coating Commentary

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Automotive Clearcoat vs. The Real World

Nowhere in the coating industry is there more potential for the use of powder coating technology than in the automotive area. Unquestionably, application equipment suppliers, filtration and coating manufacturers, and others stand to benefit from enormous growth in the automotive industry.

In a global marketplace, every automotive manufacturer is faced with increasing environmental pressure for both plant emissions and worker safety. Economic conditions demand ways to either lower vehicle production costs or provide added value for which consumers will pay more. The introduction of powder coating into assembly plants in the late 1980s was successful. Suppliers were able to demonstrate the same benefits that general metal, appliance and even automotive component suppliers had been realizing for years: Space and energy savings, and the ever-popular "no runs, no drips, no sags." Some plants have been successful in not only recovering overspray, but reclaiming it as well.

Today's Challenge:

Technology Improvements
Those surface primer or anti-chip applications, however, have the benefit of being located under several layers of additional coatings, where traditional powder orange peel, agglomeration or back-ionization craters are ultimately hidden. Improvements to the application technology and material chemistry remain to be solved.

The next several years will be exciting as plants move past primers into powder topcoats. For powder to realize its full potential in the automotive industry, we—in the paint

finishing industry—must address issues of technology, value-added integrated solutions, global standardization ... and performance, performance, performance.

Increased research, as well as collaborative efforts such as the Paint Consortium (LEPC) in the U.S., and similar projects in other parts of the world, are critical. Make no mistake: The larger system integrators and equipment players are heavily involved in the consortium in research and development, as well as in the design, engineering, fabrication and operation of these prototype automotive powder coating lines. But the true advances—the breakthrough events—are more likely to come from the small players in this industry. The ability to accurately control and apply uniform amounts of contamination-free powder materials, at transfer efficiencies equal to or higher than

those of today's liquid processes, will definitely push the envelope of leading-edge technology.

It will be the small players, therefore, who develop these improvements, because they are not motivated by what the automotive industry wants, but what the average general industry account needs to survive. It is not by accident that a few common components or parts of the various powder consortiums around the world have similarities. It is because of political agendas and regional preferences. These same elements will also slow the success rate of their programs.

If these and other objectives can be met, then the future for powder coatings in the automotive industry is clear. And the opportunities for the "tier" suppliers, as well as for general finishing accounts, will be brighter as well. **P&SF**

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