

## **Formulating for Improved Flexibility and Impact Resistance**

Chuck Danick

Danick Specialties & Support Inc.  
1390 Windward Lane  
Niceville FL 32578

Presented at the  
*International Waterborne, High-Solids, and Powder Coatings Symposium*  
February 2 – 4, 2005  
New Orleans, LA, USA

Symposium Sponsored by  
The University of Southern Mississippi  
Department of Polymer Science

### Abstract:

Formulating powder coatings for improved flexibility and impact resistance can be accomplished a number of ways.

- Selecting the resin system
- Optimizing adhesion of the powder coating
- Assuring full cure of the powder coating
- Including additives in the powder coating
- Modifying or adding an additional curative
- Reducing filler content
- Using thinner films

Most recently, powder coating manufacturers have been seeking approaches to improve the flexibility and impact resistance of “super-durable” powder coatings.

This paper will cover the various strategies used to improve flexibility and improve impact resistance of powder coatings.