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## **POWDER COATINGS -BASED ORGANIC FILMS**

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### **Abstract**

Powder coatings are finely grounded plastic particles consisting of resin, crosslinking agents (not used in thermoplastic powders), pigments, extenders and specific additives. When baked at a sufficiently high temperature, powder coatings melt out to form a continuous film. For thermosetting powders, a chemical reaction, either condensation or addition, also takes place. This fused film has the uniformity, color, toughness, and other properties generally associated with protective and decorative coatings, and presents superior properties, such as adhesion, corrosion and chemical resistance.

Powder coatings applied as a dry material contain very little, if any, volatile organic compounds (VOCs). As no solvent is involved in the production and application of powder coatings, there is a reduction in fire risk, there are no costly wastes of organic solvents, and the health hazard to operators is reduced, too.

*Keywords:* thermoplastic powder, thermosetting powder, organic films, coatings, volatile organic compounds (VOCs).

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