

DRY-BLEND METALLIC PRODUCTS

Metallic appearances are achieved by combining special effect metallic flake or pearlescent pigments with base powder. A few commonly used special effect materials include aluminum, bronze, silver and micas. Dry-Blends are a combination of these specialty materials and base powder that are homogeneously blended together. Dry-Blend powders are available in Epoxies, TGIC Polyesters, Hybrids, Urethane, Acrylic, TGIC Free, and Primid chemistries. Dry-Blend can also be an option for some AAMA compliant powders depending on the required size of the metallic particle needed to match the appearance.

Dry-Blend metallic coatings eliminate additional handling steps used in bonded metallic powder coatings.

A Dry-Blend approach has the following advantages:

- Small batch/short lead times- minimum batch sizes are available below 500 lbs. Lead time is typically much shorter than bonded metallic powder coatings.
- Spray to waste- lower cost option for powder coating applications that are not reclaimed
- Low cost- Dry-Blend is a low-cost option due to the reduced handling steps and processing when compared to bonded powder coatings

Dry-Blend powder products can present challenges when it comes to application, reclaim and color consistency.

Application

One issue that can occur is gun spit due to the buildup of Dry-Blended metallics or micas that collect on the tip of the spray gun. The buildup then releases off the tip and transfers onto the part which results in a defect in the finished coating.

Metallic picture-framing or other variations can occur with electrostatics, gun to part distance, film thickness, etc.

Reclaiming

Reclaiming, especially in a cyclone system, is not recommended with the use of Dry-Blended powder. The ratio of metallic to base in reclaimed powder differs greatly from virgin powder which results in variation in color, opacity, and appearance.

Color

Dry-Blend is not recommended in highly color critical applications.

TCI generally recommends a bonding process for metallic applications that have challenging application requirements, reclaim requirements or highly color critical applications.