



## Custom Powder Coatings

# Thermoplastic Coating Powder

A polyethylene copolymer based thermoplastic general purpose protective coating powder with outstanding mechanical performance, impact resistance and UV-stability. May be applied by fluidized bed, hot-flocking and electrostatic application methods. Store in a cool area (under 100 F) for an unlimited shelf life. VOC content is zero.

### Application

For fluidized-bed dipping, preheat parts to 400 F (adjust according to part thickness and mass). Dip parts in fluidized-bed of powder for 4 - 6 seconds. Carefully blow off the excess powder. Finished thickness should be .008" to .012". Adjust preheat, and/or dip time to control thickness. For smoother surface finish (if necessary), parts may be post-flowed for a short period of time ranging from several minutes or more depending on the amount of heat retained by the part and the post-flow temperature. Suggested post-flow temperatures are 325 F to 400 F. Post-flow only long enough to obtain a glossy smooth appearance. No cure time is needed. Melting point of the powder is 221 F. Overheating may cause browning, degradation or embrittlement. Coated part may be put into service when cooled.

Theoretical coverage: Sq.Ft./Lb.@ .008" = 24.7

“ @ .012" = 15.5

Recommended thickness is a minimum of .008" to a maximum of .030".

### Properties

|                               | Testing Method:          | Results:  |
|-------------------------------|--------------------------|---|
| Flexibility (conical mandrel) | ASTM D 522               | 1/8 inch, no cracks (greater than 32%)                    |
| Adhesion                      | ASTM D 4541, ASTM D 3359 | >1,000psi / (5A)  |
| Impact Resistance             | ASTM D 2794              | >384 in./lbs.   |
| Gloss (at 60 degrees)         | ASTM D 523               | 60-75   |
| Hardness (Shore D)            | ASTM D 2240              | 52  |
| Taber Abrasion                | ASTM D 4060              | 30 (mg loss, CS 10 wheel)*<br>100 (mg loss, CS 17 wheel)* |
| Dielectric Breakdown          | ASTM D 149               | 893+/- 163 volts/mil**                                    |
| Volume Resistivity            | ASTM D 257               | 4.67 X 10 <sup>13</sup> Ohms/cm                           |
| Salt Spray Resistance         | ASTM B-117               | >2,000 Hours  |
| Humidity Resistance           | ASTM D 2247              | No blistering or loss of gloss after 1,000 hours          |

\* (1,000 g load/1000 cycles)

\*\* data obtained using 20 mil natural coatings - pigments may cause varying results

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