

## ANTIMICROBIAL Powder Coating

### Product Description:

National Paints Antimicrobial Powder Coating is a thermosetting powder coating based on Silver Ion Antimicrobial technology to produce a hygienic coating system. The coatings based on this technology provide the required decorative effect as well as chemical and physical properties. It provides an extra level of protection against microbial growth on the surface of coated parts.

National Paints Antimicrobial Powder Coating is available in a variety of colors as per RAL Card, custom-made shades in Glossy, Semi-gloss, and Matt finishes. It is available in a variety of technologies, such as Pure Epoxy, Hybrid, Pure Polyester Architectural, Super Durables, and Ultra Low Bake Powders.

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### Application Areas:

National Paints Antimicrobial Powder Coating is designed to be used on objects where there is a requirement to maintain a low level of microbes, such as food preparation areas and catering items, medical-related items, instrument trays, light fixtures, cabinets, beds, etc.

Similarly, in the areas having more daily usage such as door handles, lockers/changing room, shopping cart, public transport, school, park/playground items, child care facilities & playing area, etc.

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### Powder Application:

National Paints Antimicrobial Coating can be applied by corona Electrostatic Powder Spray – 40 to 100 KV. Over-spray powder can be reclaimed using suitable equipment and recycled through the coating systems.

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### Pre-Treatment:

Substrate should be free of grease, oil, dirt, fingerprints, and drawing compounds, remove all contamination and apply surface treatments to get optimum adhesion and coating performance properties. The use of a chemical conversion coating prior to the application of a powder coating is strongly recommended, i.e. Iron or Zinc Phosphate.

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**Powder Properties:**

|                        |    |   |   |             |
|------------------------|----|---|---|-------------|
| Chemical Type          | -: | <b>Available for indoor MX &amp; outdoor coating PE, PS</b>                             |   |             |
| Gloss @ 60° (ISO-2813) | -: | Glossy Finish   | - | 90 (+/-) 10 |
|                        | -: | Semi-glossy Finish  | - | 77 (+/-) 7  |
|                        | -: | Matt Finish   | - | 30 (+/-) 5  |
|                        | -: | Dead Matt Finish  | - | 5 (+/-) 3   |
| Particle Size          | -: | 60% above 32 micron sieve   |   |             |
| Specific Gravity       | -: | 1.2 – 1.6 (Depending upon the color & Finish). Theoretical Coverage                     |   |             |
|                        | -: | 8 – 13sq. meters/kg (as per Dry Film Thickness, Specific Gravity & Transfer efficiency) |   |             |
| Curing Schedule        | -: | 200 °C/10-15Min & 190 °C/15-20Min (metal temp.)   |   |             |

**Coating Properties:**

|                                  |    |                                |
|----------------------------------|----|--------------------------------|
| Cupping Test (ISO-1520)          | -: | 5mm Pass (No surface cracking) |
| Impact Test Direct (ISO-6272)    | -: | 40 kg/cm (No surface cracking) |
| Impact Test Indirect (ISO-6272): | -: | 40 kg/cm (No surface cracking) |
| Flexibility (ASTM D 552)         | -: | 180 deg (No surface cracking)  |
| Dry Adhesion (ISO-2409)          | -: | GT – '0'                       |
| Flexibility (ISO-1519)           | -: | 5 mm passes (No film cracking) |



### Corrosion Testing:

#### Acetic Acid Salt Spray (ISO 9227)

After 1000 hours :- Maximum 15mm<sup>2</sup> permeation  
for a scratch of 10cm

#### Humidity Resistance (ISO 6270-2)

After 1000 hours :- No permeation exceeding 1mm on  
both sides of the scratch

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**Storage conditions:** Store powder in a dry, cool condition. Do not exceed 33°C. Keep powder in packed condition if not in use to avoid contamination and moisture. Do not mix with any other powder.

**Shelf life** : The powder has a shelf life of one year from the date of manufacture.

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*The information in this Data Sheet is the outcome of NP research work and experience. The information contained herein is believed to be accurate but cannot be taken as a formal warranty.*

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