



PURE POLYESTER PE-Series – Powder Coating

Product Description:

National Paints PE-Series is a thermosetting powder coating based on polyester resins and hardeners. It is developed to satisfy the requirements of exterior durability with attractive decorative finishes. This series offers excellent gloss retention and resistance to color change properties.

National Paints PE-Series are available in a variety of colors as per RAL Card, custom-made Shades in Glossy, Semi-glossy, and Matt finishes. Other patterns like Grit Finish, Texture, and Hammer Tone & Metallic Finishes are also available

Application Areas:

National Paints PE-Series is mainly recommended for Exterior applications. Typical application areas are General Industry, Air Conditioner Cabinets, Garden Furniture, Playground Items, Automobile Accessories, Light Fixtures, Firefighting equipment, etc.

Powder Application:

National Paints PE-Series 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.

Pre-Treatment:

Substrate should be free of grease, oil, dirt, and fingerprints. Remove all contamination and apply surface treatments to get optimum adhesion and coating performance properties. The recommended types of pre-treatments for the most frequently used substrates are:

| | | |
|-----------------------------|----|---------------------------------------|
| <i>For Steel</i> | -: | <i>Zinc Phosphate</i> |
| <i>For Galvanized Steel</i> | -: | <i>Chromate treatment</i> |
| <i>For Aluminum</i> | -: | <i>Chromate treatment (DIN 50939)</i> |

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Powder Properties:

| | | | | |
|------------------------|----|---|---|---------------------|
| Chemical Type | -: | Pure Polyester – PE Series | | |
| Gloss @ 60° (ISO-2813) | -: | PEFG (Glossy) | - | 90 (+/-) 10 |
| | | PESG (Semi-glossy) | - | 77 (+/-) 7 (P-0522) |
| | | PESM (Matt Finish) | - | 30 (+/-) 5 (P-0522) |
| | | PEFT (Sandy Finish) | - | 12 (+/-) 5 |
| | | PECT (Texture Finish) | - | 20 (+/-) 5 |
| 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:

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|---------------------------------|----|--------------------------------|
| 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) | -: | 180deg (No surface cracking) |
| Dry Adhesion (ISO-2409) | -: | GT – '0' |
| Pencil Hardness (ASTM D 3363) | -: | H-2H passes (No pencil marks) |
| Flexibility (ISO-1519) | -: | 5 mm passes (No film cracking) |

Corrosion Properties:

Acetic Acid Salt Spray (ISO 9227)

After 1000 hours -: Maximum 15mm² permeation
For a scratch of 10cm

Humidity Resistance (ISO 6270-2)

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

Accelerated weathering (ISO 16474)

UVB-313 – 300hours
4 hours @ 50°C UV -: No chalking with excellent color stability
4 hours @ 40°C Condensation and gloss retention

UVA-340 – 1000hours
8 hours @ 60°C UV -: No chalking with excellent color stability
4 hours @ 45°C Condensation and gloss retention

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 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.