

## **POLYESTER ARCHITECTURAL PA1000 Series - Powder Coating**

### **Product Description:**

National Paints PA1000 Series is an architectural powder coating based on specially selected polyester resins and hardeners. It is mainly developed to fulfil exterior durability requirements with attractive decorative finishes combined with optimum protective properties. The PA1000 series offers excellent gloss retention and resistance to color change properties.

National Paints PA1000 Series is available in a variety of colors as per RAL Card, custom-made shades in glossy, semi-gloss, and matt finishes. Other patterns like sandy finish, coarse textures, and metallic finishes are also available.

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### **Application Areas:**

National Paints PA1000 Series is mainly recommended for Exterior architectural applications. Typical application areas are aluminium industry, Air Conditioner Cabinets, Garden Furniture, Playground items, Automobile Accessories, and Light Fixtures, etc.

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### **Powder Application:**

National Paints PA1000 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.

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### **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:

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

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### Product Warranty:

National Paints PA1000 Series comes with a 10-year product warranty for exterior durability when applied on aluminium substrates, subject to terms & conditions.

### Powder Properties:

Chemical Type	-:	Polyester Architectural – PA1000 Series			
Gloss @ 60° (ISO-2813)	-:	PA1008 (Glossy)	-	90 (+/-) 10	(P-1495)
		PA1007 (Semi-glossy)	-	77 (+/-) 7	(P-1495)
		PA1003 (Matt Finish)	-	30 (+/-) 5	(P-1524)
		PA1001 (Sandy Finish)	-	10 (+/-) 5	
		PA1000 (Dead Matt)	-	5 (+/-) 3	(P-1524)
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 / (10-15)Min & 190°C / (15-20)Min (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'
Pencil Hardness (ASTM D 3363)	-:	H-2H passes (No pencil marks)
Flexibility (ISO-1519)	-:	5 mm passes (No film cracking)

## Coating Properties:

### 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

### 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

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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 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.*