



NATCOOL Series POWDER COATING

Product Description:

National Paints NATCOOL Series is developed to reduce the temperature of the architectural components being exposed to the sun. These are heat reflective Powder Coatings that helps in reducing the energy consumption of the facility and provide comfort to the people residing in the facility. These Coatings are developed using special IR base pigments that helps in reflecting the majority of solar radiations falling on the coated objects, resulting in less heat absorption.

National Paints NATCOOL Series are available in an Architectural and Superdurable technologies and in variety of colors.

Application Areas:

National Paints NATCOOL Series is recommended for Exterior applications where the coated parts come in contact with direct sunlight. Typical application areas are Building components i-e Windows, Doors, Hand Rails, Metal Roofs, Curtain walls etc.

Powder Application:

National Paints PE Series can be applied by automatic corona Electrostatic Powder Spray – 40 to 100 KV. Over spray powder can be reclaimed using suitable equipment's and recycled through the coating systems.

Powder Application:

Substrate should be free of grease, oil, dirt, finger prints, and drawing compounds, 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>Iron or Zinc Phosphate</i>
<i>For Galvanized Steel</i>	-: <i>Chromate treatment Chrome free</i>
<i>For Aluminum</i>	-: <i>Chromate treatment (DIN 50939)</i>



Powder Properties:

Chemical Type	-:	Polyester		
Gloss @ 60° (ISO-2813)	-:	Glossy	-	90 (+/-) 10
	-:	Semi-glossy	-	77(+/-)7
	-:	Matt Finish	-	30 (+/-) 5
Particle Size	-:	60% above 32 micron sieve		
Specific Gravity	-:	1.2 – 1.6 (Depending upon the color & Finish).		
Curing Schedule	-:	200 °C/10-15Min & 190 °C/15-20Min (metal temp.)		
TSR Values	-:	Between (25-75) % color dependent		

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

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