



PURE-POLYESTER POWDER - TECHNICAL DATA SHEET

POWDER COATING – PURE POLYESTER (PP)

Product Name: PP RAL 7032 Structure

Supplier: Unit of Rapid Engineering Co. Pvt. Ltd (India)

Color / RAL: RAL 7032 – Pebble Grey

Finish: Structure / Textured

Product Type / Chemistry: Pure Polyester (PP) Powder Coating

Recommended Use: Outdoor durable powder coating for metal enclosures / fabricated steel components (architectural & industrial use)

POWDER PROPERTIES (TYPICAL)

Property	Specification	Result
Specific Gravity (Theoretical)	1.55 – 1.75	OK
Theoretical Coverage @ 80 µm	7.14 – 8.06 m ² /kg	OK
Storage Stability @ 25°C	One Year	OK

PARTICLE SIZE DISTRIBUTION (MICROTRAC S3500)

Sieve / Size	Specification	Result
< 32 µm	35 – 40 %	OK
< 63 µm	75 – 85 %	OK
< 105 µm	95 – 98 %	OK
< 250 µm	100 %	OK

APPLICATION PARAMETERS (RECOMMENDED)

Parameter	Requirement/ Specification	Result
Substrate used for testing	CRCA 0.6 ± 0.02 mm	OK
Application Method	Electrostatic Spray Gun	OK
Gun Voltage	60 – 90 kV	OK
Baking Schedule (Metal Temperature) – Minimum	180°C / 15 min	OK
Baking Schedule (Metal Temperature) – Maximum	200°C / 10 min	OK
Recommended DFT	80 µm (ASTM D7091-05)	OK

Note: Actual cure schedule may vary based on part thickness, oven type, and airflow. Always ensure metal temperature is achieved.

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CURED FILM PROPERTIES (TESTED ON MILD STEEL)

Test / Property	Standard	Requirement	Result
Shade / Colour (Visual)	—	As per standard	OK
Colour – D65, 10° (CIE Lab*)	—	$\Delta E < 1.0$ vs standard	OK
Surface Finish	ASTM D1729	Structure	OK
Gloss @ 60°	ASTM D523	20 $\pm$ 5	OK
Bend Test (Cyl. Mandrel)	ASTM D522	3 mm	Pass
Impact – Direct	ASTM D2794-69	40 kg·cm	Pass
Impact – Reverse	ASTM D2794-69	40 kg·cm	Pass
Erichsen Cupping	ASTM E643	6 mm	Pass
Adhesion	ASTM D3359	GT-0 / 100 (Excellent)	Pass
Salt Spray (5% NaCl, 35 $\pm$ 3°C)	ASTM B117	500 hours	Pass
QUV Accelerated Weathering (A340 / B313)	ASTM G154	300 hours	Pass

TEST NOTES / BASIS OF RESULTS

Test Result: OK

All tests were carried out on **0.6 mm thick Mild Steel (M.S.) panels**, after being **scuffed with emery paper and cleaned with solvent** prior to coating.

STORAGE & HANDLING

- Store under dry conditions with good ventilation at a temperature not exceeding 25°C.
- Recommended storage duration: Up to 12 months.
 - If storage exceeds 12 months, powders may still retain optimal properties but should be checked for free-flowing characteristics.
- Protect from excessive heat, humidity, water, and contaminants (e.g., dust, dirt, or foreign powders).
- Leftover powder should be stored in a cool, dry area and kept sealed to prevent exposure to air and moisture.

Note: Powder properties may deteriorate if exposed to air or moisture for extended periods. Proper storage ensures optimal performance.

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DISCLAIMER

The information contained in this TDS is based on laboratory testing and is provided as guidance. Actual performance may vary depending on substrate condition, pretreatment, application parameters, curing conditions, and service environment.

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