



Prominent Australia Pty Ltd

Supplier and distributor for powder coating products

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TECHNICAL DATA SHEET

Heat resistant - Black

Product description

HR Black is a durable thermosetting powder with excellent performance and offers excellent gloss retention and resistance to colour change properties.

Features & Benefits

- Single coat application
- Interior and Exterior applications
- No solvents
- TGIC Free
- Diminish risk to health
- Does not contain ecologically toxic materials.

Pre-treatment

- The substrate should be free of grease, oil, dirt, fingerprints, and drawing compounds, to ensure optimum adhesion and coating performance properties.
- For maximum protection, it is essential to pre-treat the substrate prior to the application of powder.
- For ADC Components: Shot blasting.
- (Chrome free pre-treatment can be done after shot blasting if required.)

Shot blasting process

S.no	Product Parameters	Specifications	Measuring Technique
1	Shot Size	0.4 to 0.6	Profile projector
2	Ra Value	3 to 6 Microns	Replica tape and gage

Application Conditions

S.no	Product Parameters	Specifications	Measuring Technique
1	Paint coating Thickness	120+/-20 Microns	DFT Meter
2	Powder flow	40-60 % of flow	Control Panel
3	Booster Air	3-5 kg / cm ²	Control Panel
4	Fluidization Air	0.1-0.5 kg/cm ²	Control Panel
5	Current	50-80 microampere	Control Panel
6	Voltage	50-90 KV	Control Panel
7	Curing Temperature	200 degree C for 10 min. (EMT)	Control Panel & Fixed Conveyor speed

Powder properties :					
Sr no.	Test	Specification		Observation	Result
1	Powder condition	Free flow & no agglomerate		Free flow powder	Ok
2	Powder type	Silicon powder		Silicon powder	Ok
3	Specific gravity	1.50-1.80		1.75	Ok
4	Particle size distribution	Below 10 micron	10% Max	6.85	Ok
		Under 32 micron	35-45% Max	42.2	Ok
		Under 63 micron	75-90% Max	85.12	Ok
		Under 120 micron	100% Max	99.99	Ok
Short term properties :					
Sno.	Parameter	Test method / Instrument standard	Specification / Acceptance criteria	Observation	Results
1	Color/Shade	Observe in day light Or equivalent at 35° as per ASTM D-1729-82	Color/shade to match with the approved shade panel visually.	Black texture finish match with approved std. color	Passes
2	Gloss	Multi angle secular gloss meter test as per ASTM D-523-80	To match with the specified value on approved shade panel. Gloss @ 60° - 3% - 12%	04-05 Units	Passes
3	DFT	DFT Meter	60-100 micron	70-85 microns	Passes
4	Adhesion on surface	2 X 2 mm cross cut	No peel off	Adhesion 100/100	Passes
5	Pencil Hardness Test	H Pass . Test as per ASTM D 3363-74	No scratch on test surface – H	H Pass	Passes
6	Flexibility	Use 1 mm thick panels, bend at 180 deg. On conical mandrel (10 mm). ASTM D 522-60	No cracking & no peel off.	No cracking & no peel off.	Passes
7	Impact	Use DU PONT Type impact tester, with 0.8 to 1.0 mm thick panel. Drop weight to 1 Kg. From 25 cm height.	No cracking & no peel off.	No cracking & no peel off.	Passes
Long term properties :					
8	Neutral Salt Spray Test	Test at 35±1°C with 5% nacl in distilled/ DM water. Panels to be placed at 15 to 30 degree to vertical. Fog collection 1-2 ml//hr. Tested samples to be cleaned. Dried and checked after 2 – 3 hours. Use paint film remover like adhesion tape to evaluate. Test as per ASTM B117 & ASTM D1654. Tested for 96 hours.	Red Creepage < 3 mm Max across the scribe each side - No Blister	No blister & no rust. Tape test is ok.	Passes

Heat performance test :					
9	Heat Aging Test	Heat the panel for 600°C - 650°C for up to 4.5 hours.	No loss of adhesion	No peel off, no flaking, adhesion 100/100	Passes
10	Thermal Shock Test	Heat the panel @ 650°C (Gradual increase from room temperature to 600°C - 650°C) water quenching at room temperature	No loss of adhesion	No peel off, no flaking, adhesion 100/100	Passes

Safety Precautions: Please consult the material safety datasheet (MSDS)

NOTE: Above data are based on the result of our tests in the laboratory condition. It is given in good faith and with every belief in its accuracy.