Thermaset Ltd.
MANUFACTURERS OF POWDER COATINGS

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Architectural Polyester Matt Pearlescent Powder Coatings

Date: 14/01/2020

Product Code: Generic sheet for the series of Architectural Polyester Matt Pearlescent Powder Coatings

Product Description:
Thermaset Limited offer a range of polyester powder coatings designed for both interior and exterior use. This range is specially formulated on selected polyester resins and pigments to give a tough decorative finish with excellent outdoor durability, designed for use on architectural applications such as buildings, window frames, fascia and fencing.

Range Available:
Thermasets' Architectural Polyester Matt Pearlescent Powder Coatings are available from stock in a range of RAL colours.

Substrate Preparation:
For maximum protection it is essential to pretreat architectural components prior to the application of Thermaset Limited Architectural Polyester Matt Pearlescent Powder Coatings.
Aluminium components should receive a full multi-stage chromate conversion coating or similar chrome-free pretreatment to clean and prepare the substrate. Detailed advice should be sought from the pretreatment supplier.
Galvanized steel requires multi-stage pretreatment with either zinc phosphate or chromate conversion. Depending on the type of galvanizing, degassing or use of anti-bubbling additives may be required. Detailed advice should be sought from the pretreatment supplier.
Ferrous substrates require iron or zinc phosphate pretreatment. Detailed advice should be sought from the pretreatment supplier.

Application:
Thermaset Limited Architectural Polyester Matt Pearlescent Powder Coatings can be applied by manual or automatic electrostatic spray equipment, an even dry film thickness of 60-70 microns is recommended. Only one batch and one spray run should be used for components that will be visible simultaneously after assembly.

Powder Properties:

Type	Thermosetting polyester with a non-TGIC curing agent
60° Gloss (EN ISO 2813)	Matt approximately 30%
Specific Gravity	1.2-1.8 depending on colour
Particle size	Suitable for electrostatic spray
Stoving schedule	See box label for recommended curing conditions. Typical values are; 10 minutes @ 200°C peak metal temperature
Storage and shelf life	24 months when stored in cool (below 25°C) dry conditions. Open boxes must be resealed.

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POWDER COATING

Test Conditions:

Unless otherwise specified, all tests have been carried out under laboratory conditions on 0.8mm aluminium panels and are given for guidance only. Actual product performance will depend on the circumstances under which the product is used. A powder coating dry film thickness of 60-70 microns was used.

Mechanical Tests:

Flexibility (cylindrical mandrel)	ISO 1519	Pass minimum 5mm
Buchholz Hardness	ISO 2815	Pass minimum 80
Impact	ISO 6272-2	Pass minimum 2.5Nm
Erichsen cupping	ISO 1520	Pass minimum 5mm
Adhesion (2mm cross hatch)	ISO 2409	Pass Gt 0

Chemical Tests:

Constant Humidity	ISO 6270	Pass 1000 hours without any effect.
Boiling water	2 hours	No defects or detachments.
Acetic Acid Salt Spray	ISO 9227	After 1000 hours/10cm scratch: Total corrosion<16mm^2 Maximum length <4mm
Sulphur Dioxide	ISO 3231	After 24 cycles, infiltration<1mm from scratch.
Mortar resistance	EN 12206-1	Easy to remove, no staining.

Weathering Tests:

Accelerated Weathering	ISO 11341	After 1000 hours, gloss retention >50%
Natural Weathering (Florida)	ISO 2810	After 12 months exposure, gloss retention >50%

Chemical Resistance:

Generally good resistance to acids, alkalis and oil at normal temperatures.

Health and Safety Precautions:

This product is intended for use only by professional applicators in industrial environments. Consult the relevant Material Safety Data Sheet available from Thermaset.

Restrictions of Hazardous Substances (RoHS2)

Thermaset Limited Architectural Polyester Matt Pearlescent Powder Coatings range is suitable for use on items covered by Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (Directive 11/65/EU, ROHS 2). Products in the range contain none (or less than the maximum allowed amount) of the following restricted chemicals:-

Lead, Mercury, Cadmium, Hexavalent Chromium or their compounds.

Poly-brominated biphenyl (PBB) or Poly-brominated diphenyl ether (PDBE) flame retardants.

Bis(2-ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP)