Thermaset Ltd.
MANUFACTURERS OF POWDER COATINGS

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Polyester Low Bake Matt Powder Coatings

The information given in this data sheet is generic for Thermaset Limited Polyester Low Bake Matt Powder Coatings.

Product Description:

Thermaset Limited offer a range of polyester low bake matt 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 good outdoor durability combined with lower temperature cure.

Colours Available:

Thermasets' Polyester Low Bake Matt Powder Coatings can be matched to customer supplied samples or to many of the RAL and BS colour ranges.

Substrate Preparation:

For maximum adhesion the substrate must be thoroughly cleaned of grease, rust etc. by shot blasting, solvent or chemical degreasing. For maximum protection it is essential to pretreat the substrate prior to the application of Thermaset Limited Polyester Low Bake Matt Powder Coating.
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-gassing 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 Polyester Low Bake Matt Powder Coating can be applied by manual or automatic electrostatic spray equipment, an even dry film thickness of 60-70 microns is recommended.

Powder Properties:

Type	Thermosetting polyester with a non-TGIC curing agent.
60 º Gloss (EN ISO 2813)	Approx 30 GU (gloss units)
Specific Gravity	1.3 -1.7 depending on colour
Particle size	Suitable for electrostatic spray
Stoving schedule	See box label for recommended curing conditions. Typical values are; 10 minutes @ 160ºC peak metal temperature
Storage and shelf life	12 months when stored in cool (below 25ºC) dry conditions. Open boxes must be resealed.

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Test Conditions:
Unless otherwise specified, all tests have been carried out under laboratory conditions on 0.8mm aluminium chromated 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 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 6270-2	Pass 1000 hours.
Boiling water	2 hours	No defects or detachments.
Salt Spray Resistance	ASTM B117	Pass 1000 hours.
Mortar resistance	EN 12206-1	Easy to remove, no staining.

Exterior Durability:
After 12 months exposure, some loss of gloss and slight colour change may occur. No film breakdown or loss of protection.

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 Polyester Low Bake Matt Powder Coatings are 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). This product contains 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)

Our data sheets and sales literature are issued for the purpose of supplying product information. The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. Always read the Material Safety Data Sheet and the Technical Data Sheet for the product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous improvement. It is the user's responsibility to verify that this data sheet is current prior to using the product.