Thermaset Ltd.

MANUFACTURERS OF POWDER COATINGS

Epoxy-Polyester Powder Coating

Date: 26/01/2019

Product Description:

Thermaset Limited offer a range of epoxy-polyester powder coatings designed for interior use. This range is specially formulated on selected epoxy and polyester resins and pigments to give a tough decorative finish. Typical areas of use are domestic appliances, office furniture and shop fittings.

Colours Available:

Themasets' Epoxy-Polyester Powder Coatings can be matched to customer supplied samples or to many of the RAL, BS, NCS and Pantone 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 epoxy-polyester 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 epoxy-polyester powder coatings can be applied by manual or automatic electrostatic spray equipment, general recommendation is for a film thickness of 60-100 microns depending on covering power and colour, with a minimum recommendation of 60 microns.

Powder Properties:

Type	Thermosetting epoxy-polyester hybrid resin system.
Gloss	A range from Gloss >85% down to Matt 10%.
Specific Gravity	1.3 to 1.8 g/cm^3 depending on colour.
Particle size	Suitable for electrostatic spray
Stoving schedule	See box label for recommended curing conditions. Typical values are; 10 minutes @ 180°C peak metal temperature
Storage and shelf life	12 months when stored in cool (below 25°C) dry conditions. Open boxes must be resealed.

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Claire Works,
Anders,
Lichfield Road Industrial Estate
Tamworth, B79 7TA
Telephone (01827) 55777
Facsimile (01827) 53713
www.thermaset.co.uk

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Test Conditions:
Unless otherwise specified, all tests have been carried out under laboratory conditions on 0.8mm degreased and zinc phosphate steel 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
Impact	ISO 6272-2	Pass minimum 25 Kg cm
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.
Boiling water	2 hours	No defects or detachments.
Neutral Salt Fog	ASTM B117	Pass 250 hours, < 2mm creep from scratch.

Exterior Durability:
Not suitable for constant exterior exposure.

Chemical Resistance:
Generally excellent 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.

Restrictions of Hazardous Substances (RoHS2):
Thermaset Limited Epoxy-Polyester 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). Products 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), Bis(2-ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP)