

POWDER COATING

Architectural Polyester Gloss Powder Coatings

Date: 14/06/2018

Product Code: Generic sheet for the series TLQ- -G Architectural Polyester Gloss Powder Coatings

Product Description:

Thermaset Limited offer a range of polyester gloss 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, this product is tested and approved for the quality mark:



Product approved by QUALICOAT
QUALICOAT is a quality label for licensed coaters

Colours Available:

Thermaset's Architectural Polyester Gloss Powder Coatings can be matched to customer supplied samples or to many of the RAL and BS colour ranges.

Qualicoat Approval Number: P-1434

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 Architectural Polyester Gloss 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-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 Gloss Powder Coating 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:

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|-------------------------|--|
| Type | Thermosetting polyester with a non-TGIC curing agent. |
| 60° Gloss (EN ISO 2813) | Gloss 92 +/- 8 % |
| 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; 10-20 minutes @ 180°C peak metal temperature 8-16 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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Test Conditions:

Unless otherwise specified, all tests have been carried out under laboratory conditions on 0.8mm aluminium panels prepared to the specifications described in the Qualicoat standard 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. |
| 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 Polyester Gloss 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 (PBDE) flame retardants.

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

Diisobutyl phthalate (DIBP)

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