



## Overview

Polyester is the most widely specified resin system for powder coatings. It is available in various grades depending on the final application. Polyester powders can be applied to aluminium, mild steel, galvanized steel and most metal substrates. When used in combination with chrome-free pre-treatment polyester gives a long-lasting & hard-wearing finish.

## Key Points

- Excellent weather resistance
- Excellent colour stability and consistency between batches
- Good edge coverage
- Qualicoat class 1 or class 2 approved
- GSB and AMAA approved
- Wide colour range
- Widely available

## Approvals

Architectural grade thermosetting polyester powders are defined by one or more of the approvals below.

**Qualicoat** – UK and Europe: **GSB** - Germany: **AMAA** – America. Product specific approvals are detailed on page 2.

## Properties & Performance

BS EN 12206-1 (aluminium) and BS EN 13438 (galvanized steel) are the governing application standards.

Below are typical finished surface properties and performance requirements, specific powder and performance properties are detailed overleaf.

**Applied gloss @ 60°:** ISO 2813. Smooth finish. Matt, 25% to 35%. Satin, 55% to 70%. Texture. <10%

**Applied film thickness:** > 60 microns.

### Weathering:

Accelerated test, Xenon lamp. ISO 16474-1:2013. Residual gloss of >50% after 1000 hours.

Florida test, ISO 2810 : 2004. Residual gloss of >50% after 12 months.

**Adhesion:** ISO 2409. GT0.

**Corrosion:** AASS 1000 h ISO 9227. No blistering after 1000 hours.

**Colour:** Colour change  $\Delta E$ : According to Qualicoat requirements (appendix A7). Where applicable.

**Humidity:** ISO 6270-2. 1000 h. No blistering.

**Cylindrical Mandrel Bending:** ISO 1519. 5 mm pass.

**Resistance to Boiling Water:** (pressure cooker). No defect or peeling after 2 hours.

## Process

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### **Pre-treatment:**

Aluminium. Titanium-Zirconium (TiZr) non-chrome 6-stage pre-treatment.

Galvanized steel. Silane (Oxsilan) non-chrome 8-stage pre-treatment.

### **Powder application:**

After suitable pre-treatment of the material to be powder coated the metal is sprayed either manually for small jobs or difficult shapes or automatically for large more repeatable shapes.

Powder is drawn up from the storage box via the venturi principle before being mixed and diluted with dry air then directed via a gun towards the object. As the powder passes out of the end of the gun it is positively charged using a Corona system and attracted to the earthed metal (opposite charges attract). This finely coated part is then moved to the curing oven.

When cured and cooled the resulting finish is "set" in the condition where its performance can be tested.

Applied under ISO 9001: 2015 Quality Management System. Approval Nr: LRQ 10532977 .

### Product specific data

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Manufacturer:

Manufacturer product code:

RAL code:

Surface finish:

Gloss level %:

GSM class. Gloss / Satin / Matt

Applied film thickness  $\mu$ :

Qualicoat class . Certificate number:

### Project specific data

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## Warranty

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For C2 and C3 environments: 25-year warranty for gloss, colour and adhesion is offered as standard.

For C4 and C5I & C5M environments: Guarantees are conditional on project location, environmental conditions and pre-contract approval.

Warranties are offered in conjunction with Powdertech standard terms and conditions and a documented cleaning and maintenance programme.

### **Please note:**

Whilst every care has been taken to provide accurate information this document is for guidance only and should be read in conjunction with other data sheets where applicable.

This document forms no part of a contract. Any warranty is subject to individual review.