

Syntha Pulvin Matt and Synthatec Metallics - Technical Specification

Description

Syntha Pulvin Matt and Synthatec Metallics are part of a totally controlled superdurable polyester powder colouring process, guaranteed for up to 30 years, designed to decorate and protect metallic substrates exposed to extreme climatic conditions, offering excellent gloss retention whilst meeting the requirements of BS6496 and BS 6497.

Scope

For the colour coating of aluminium, galvatite and hot-dip galvanized steel.

Process Data

All components are chemically pre-treated prior to the application of the coating to promote adhesion and prevent undercut corrosion. The coating is fusion bonded at 200°C metal temperature. The coating can only be applied by fully Approved Applicators and In-House Users, who are closely monitored by Valspar Powder Coatings.

Colour Choice

Syntha Pulvin:

Matt RAL, BS and Syntha Pulvin Architectural Range and Syntha Pulvin 'Colour Mix' themed shades.

Synthatec Metallics.

Properties of the Coating

Unless otherwise stated the minimum film thickness should be 40 microns. Under normal circumstances this should lead to an average thickness of 60-80 microns on most surfaces. In special circumstances (eg: marine environments, industrial etc.) it may be necessary to apply a thicker coating. Please consult Valspar Powder Coatings.

Physical Properties

The physical properties of the coating demonstrate its overall toughness and flexibility.

Syntha Pulvin Matt and Synthatec Metallics are fusion bonded to produce one of the toughest organic finishes available today.

Adhesion: Reference BS3900 Part E6:1992; 2mm – maximum grid value zero; 100% adhesion of the coating.

Impact resistance: Reference BS6496 Part 4.7:1984; falling weight impact Pass 20"lbs – no detachment of film. The coating will withstand direct hammer-type impact without loss of adhesion.

Mandrel Bend: (flexibility of the coating)

Reference BS3900 Part E11:1985; passes 6mm. The coating will not crack when bent over a 6mm diameter mandrel.

Erichsen Cupping: Reference BS3900 Part E4; pass 6mm.

Scratch Resistance: Reference BS3900 Part E2:1992; will resist a sharp point weighted to 4000gms.

All physical properties are determined on correctly pre-treated aluminium panels at a coating thickness of 60 ± 10 microns.

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Environmental Properties

The environmental properties are a measure of the coatings exterior performance. These are assessed using globally recognised natural and artificial test methods including Florida and Allunga. The established performance values of **Syntha Pulvin Matt and Synthatec Metallics** demonstrate its exceptional ability to withstand the natural elements.

Weatherability: Weather resistance is measured by reference BS3900 Part F3: 1971 corresponding with Grey Scale 2 or greater. Any gloss reduction will occur evenly over the surface without adversely affecting the uniform appearance.

Light resistance: Reference BS3900: Wool Scale 5 or greater complying with BS1006 Xenon Test – all colours tested for minimum 2000 hours. Constant ultra-violet light only produces a marginal colour change.

Humidity resistance: Reference BS3900 Part F2; no effect after 3000 hours. Constant high humidity has no effect.

Salt Spray: Reference BS3900 Part F4:1968; no effect after 3000 hours – demonstrates the excellent corrosion resistance.

Acetic Acid Salt Spray: Reference BS6496 Part 4.9 and BS6497 Part 4.7; no effect after 1000 hours - demonstrates the excellent corrosion resistance.

Sulphur Dioxide Resistance: Reference BS3900 Part F8:1976; no colour change, softening, blistering or loss of adhesion after 240 hours. This test demonstrates the excellent properties of the coating when exposed to an industrial atmosphere.

Practical Experience

Syntha Pulvin Matt and Synthatec Metallics have been compared in accelerated tests with conventional Syntha Pulvin enabling us to predict an ultimate life of at least 30 years.

Functional Data

Mortar Resistance: No loss of adhesion or surface marring from mortar pats after 24 hours at $38 \pm 3^{\circ}\text{C}$ at $95 \pm 5\%$ relative humidity as stated in BS6496 Part 4.8:1984.

Fire Resistance:

- Building Material to BS476
- Part 7: 1987 Class 1 Surface Spread of Flame.
- Part 6: 1968 Class 0 Fire Propagation.
- Part 3: 1958 Class A External Fire Exposure Roof Test.

Compliant with London Underground Engineering Standard 2-01001-002 'Fire Safety Performance of Materials'. Suitable for use in rolling stock, below ground ('Section 12') and surface locations without restriction.

Hygiene Criteria: Odourless, non-toxic (conditional on colour), disinfectable.

Chemical Resistance: **Syntha Pulvin Matt and Synthatec Metallics** are resistant to a range of acid, alkaline and organic materials. Please consult Valspar Powder Coatings.

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Building Materials: Compatible with normal building materials – refer to Valspar Powder Coatings for details.

Protective Packaging: Selected protective low-tack tapes and packaging materials can be used – please refer to Valspar Powder Coatings.

Mastics / Sealants: Refer to Valspar Powder Coatings for details of recommended types.

Cleaning and Maintenance

Surfaces coated in **Syntha Pulvin Matt and Synthatec Metallics** should be cleaned at regular intervals. The interval will depend on the environment but it should not exceed 18 months. In harsh or marine environments cleaning should occur at intervals of not more than 3 months. Refer to Technical Advisory Sheets for further details.

On site repair remedial systems are available from specialist suppliers. Refer to Valspar Powder Coatings for details.

Health and Safety

Syntha Pulvin Matt and Synthatec Metallics should be used in conjunction with the 'Code of Safe Practice' issued by the Paintmakers Association, copies of which are available on request. Copies of 'Safe Powder Coating' produced by the European Committee of Paint, Ink and Artists Colour Manufacturers Association are also available although these are not yet endorsed by the Health and Safety Executive.

To prevent inhalation of airborne particles, face masks should be worn. Powder on the skin should be washed off with soap and water, not blown off with compressed air.

Syntha Pulvin Matt and Synthatec Metallics are non flammable, but as with all organic dusts precautions should be taken during use.

Guarantee

Syntha Pulvin Matt and Synthatec Metallics are fully guaranteed. Please refer to the guarantee document.

Standards

Syntha Pulvin Matt and Synthatec Metallics have been assessed and approved by the British Board of Agrément, certificate number 94/3041. **Syntha Pulvin Matt and Synthatec Metallics** fully meet all of the requirements of BS6496 and BS6497.

Service

A comprehensive laboratory, office and field based technical back-up service is available to ensure that the maximum benefit is obtained from the use of **Syntha Pulvin Matt and Synthatec Metallics**.

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