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Specification Guide

Specification for **Syntha Pulvin®**

30 year guaranteed matt and metallic Superdurable Polyester Powder Coating for aluminium alloy and galvanized steel

Syntha Pulvin

GUIDANCE NOTES

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GENERAL GUIDANCE NOTES

It is important that the details given in any specification ensure that the components installed on site meet the stated requirements of the specifier and the clients; equally important is the need to comply with the recommendations of the manufacturer and advisory bodies and with the restrictions or limitations set by certifying, assessment or testing bodies and issuers of guarantees.

For finishing with **Syntha Pulvin**, it is not merely the colour, gloss level and generic type of treatment which must be specified, but also a range of conditions, set out in the guidance notes, which enable us to provide our guarantee of up to 30 years, for a product with a life expectancy in excess of 30 years

SYNTHA PULVIN® Specification Guide

INTRODUCTION

VALSPAR CORPORATION

The Valspar Corporation is one of the largest global coatings manufacturers in the world, providing coatings and coating intermediates to a wide variety of customers. Since 1806, Valspar has been dedicated to bringing customers the latest innovations, the finest quality, and the best customer service in the coatings industry.

With more than 7,000 employees in over 80 locations around the world, Valspar is in a truly unique position to supply customers with the coating solutions they need.

Valspar is a major world-wide producer of thermosetting powder coatings, marketing on a world-wide basis from manufacturing plants in the USA, UK and China

In the United Kingdom, Valspar Powder Coatings Ltd is the powder coating trading company, manufacturing an extensive range of powders for automotive, appliance, industrial and architectural markets.

SYNTHA PULVIN

SYNTHA PULVIN is a registered trademark of Valspar Powder Coatings Ltd, manufactured at the Birmingham factory and marketed throughout the British Isles by Valspar.

SYNTHA PULVIN, since its inception in the 1970's, has been the pacesetter in terms of innovation, quality and colour. It has over 30-years track record and has added beauty, elegance and interest to thousands of prestigious buildings.

SYNTHA PULVIN product development also works in unison with designers, ensuring innovative technologies and finishes are always available to meet the future needs of the specifier.

SYNTHA PULVIN dominates the architectural market place for polyester powders and can justifiably claim to have changed the face of British architecture.

TECHNICAL EXCELLENCE

The Valspar philosophy is to extend its market leading position by ensuring that a competitive technical edge is maintained. New technology and new applications demand a constant re-appraisal of products and services and a policy of innovation in every department. The company is committed to meeting the challenge of technical development and changing customer requirements.

The focus on technical excellence is reflected in the wide range of products and services provided. Valspar offer a technically advanced bonding process for metallic finishes and an advanced range of superdurable polyester designed to decorate and protect architectural metalwork, in addition to our comprehensive range of stock products

QUALITY & RESOURCES

Valspar has a wide range of manufacturing equipment and the Aston Church Road site is a modern and highly efficient powder production facility

The factory is designed for maximum flexibility and speed producing powders that not only satisfy the needs of a wide range of customers but also profit making rapid batch turnaround and manufacturing efficiency.

Valspar has accreditation for BS EN ISO 9001 Quality Assurance standards, a comprehensive evaluation concerned not just with the quality, but with every aspect of company operations. This is a key factor in the constant effort to maintain exceptional standards of quality and service.

The **SYNTHA PULVIN** system, the leading architectural polyester powder coating, has British Board of Agrément certification, a further confirmation of product quality and manufacturing systems. It is a matter of pride that the **SYNTHA PULVIN** system has so far had no claims on its guarantee during the 35 years of its existence.

THE ENVIRONMENT

Caring for the Environment is now a responsibility for governments, industry and the individual. Powder coatings have major environmental benefits over traditional paints and often a parallel cost benefit. Liquid paints generally contain up to 50% solvents to enable dispersion of the resins and pigments and facilitate application. These solvents evaporate completely into the atmosphere resulting in major environmental concerns. The **SYNTHA PULVIN** system has zero VOC (Volatile organic content), therefore solvent emissions become a thing of the past thereby creating a cleaner and safer environment

SYNTHA PULVIN® Specification Guide

SYNTHA PULVIN “INNOVATION WITHOUT COMPROMISE”

SYNTHA PULVIN MATT, with its impressive technical superiority, surpasses any similar product available today.

- Superdurable formulation - 30 year Guarantee period
- Designed specifically for the UK market
- Complies fully with the requirements of the British Standards BS 6496 and BS 6497
- Tried and tested in Florida including EMMAQUA® accelerated outdoor weathering test results equivalent to 3 years South Florida testing
- Manufactured to BS EN ISO 9001
- Available only via 'Approved Applicators' and 'In-House Users' with ISO 9001 accreditation
- Awarded BBA Agrément Certificate No. 94/3041
- Wide range of colours ex-stock, including an exclusive range of Colour Consultant designed 'house' shades, SYNTHATEC metallic finishes, plus RAL and BS colours

SYNTHA PULVIN is only applied by selected 'Approved Applicators' and 'In-House Users' each of whom carries out strict quality control procedures, as detailed in the **SYNTHA PULVIN** "Product Performance and Applicator Requirements" Section 2 – "Requirements of the Approved Applicators", and is monitored by Valspar. This ensures total control over the preparation and application procedures.

Not only has each applicator been independently assessed and accredited with ISO 9001 certification but their operations and procedures form part of the assessment in the granting of the current British Board of Agrément Certificate No. 94/3041.

It is not possible to obtain **SYNTHA PULVIN** coated products from any applicator other than those 'Approved Applicators' or 'In-House Users' whose names are available from Valspar.

SPECIFYING SYNTHA PULVIN

In view of the foregoing points, it is vitally important to include all relevant issues in your contract specification, in order to ensure that you have **SYNTHA PULVIN** applied to your building.

NO OTHER SPECIFICATION SHOULD BE USED FOR THE SYNTHA PULVIN SYSTEM.

The 30 year **SYNTHA PULVIN** Guarantee* will only automatically apply to work coated to the **SYNTHA PULVIN** specification as issued by Valspar.

This Specification includes the points that must be made clear to all parties in the contract specification in order to ensure that **SYNTHA PULVIN** from Valspar is used.

*30 year guarantee applies to Syntha Pulvin Matt and Synthatec Metallics.

THIS SPECIFICATION

Specification for **SYNTHA PULVIN** Superdurable Polyester Powder Coating for Aluminium and Galvanised Steel.

It is based on the Valspar specification text to suit current specification and Polyester powder coating practice.

It has been prepared for use on CPI (Co-ordinated Project information) organised projects using CAWS (Common Arrangement of Work Sections) SMM7 (Standard Method of Measurement edition 7) arranged specification texts.

It is intended as a stand-alone specification, however, with the introduction of work section Z31 Powder Coating in the NBS (National Building Specification) Clause Library, this Specification has been numbered to enable integration with the NBS Specification.

If integration with the NBS work section is adopted, care must be taken to ensure that the clauses selected do not contradict or undermine each other.

It will be seen that some clauses are intended as substitutes for existing NBS Clauses and others can compliment the NBS clauses.

WORD PROCESSING TEXT AVAILABLE

To enable rapid production of project specific text within designer's, specifier's or purchaser's offices, the specification text is available on the internet for download at www.synthapulvin.co.uk

PROJECT SPECIFIC TEXT WRITING SERVICE

In cases where designers, specifiers or purchasers feel unable to prepare project specific text for **SYNTHA PULVIN** using this specification guide, an alternative service is available from Valspar Powder Coatings Ltd, 95 Aston Church Road, Birmingham B7 5RQ. Tel: 0121 322 6900, Fax: 0121 322 6902.

SYNTHA PULVIN® Specification Guide

DEFINITIONS OF ABBREVIATIONS:

Abbreviations used in the guidance notes, reference documents and specification clauses.

AMD	Amendment (usually of a BS or CP)	CP	Code of Practice (from BSI)
EU	European Union		
BBA	British Board of Agrément	EN	European Standard (from CEN)
BS	British Standards	ISO	International Standards Organisation
BSI	British Standards Institution	OS	Ordnance Survey
CA	Contract Administrator	UK	United Kingdom

REFERENCE DOCUMENTS

The BSI/CEN/ISO documents referred to in work section Z31 are:

ISO 1464.1994 Hot dip galvanised coatings on steel articles (ISO 1459, 1460, 1461)

BS 1470:1987 Wrought Aluminium & Aluminium Alloys for General Engineering Purposes – Plate, Sheet & Strip.

EN 515	Aluminium & aluminium alloys – Wrought products – Temper designations.
EN 573-3	Aluminium & aluminium alloys – Chemical composition & form of wrought products. Part 3: Chemical composition.
EN 573-4	Aluminium & aluminium alloys – Chemical composition & form of wrought products. Part 4: Forms of Products
EN 485-1	Aluminium & aluminium alloys – Sheet, strip & plate. Part 1: Technical conditions for Inspection & Delivery.
EN 485-2	Aluminium & aluminium alloys – Sheet, strip & plate. Part 2: Mechanical Properties.
EN 485-3	Aluminium & aluminium alloys – Sheet, strip & plate. Part 3: Tolerances on shape and dimensions for hot rolled products.
EN 485-4	Aluminium & aluminium alloys – Sheet, strip & plate. Part 4: Tolerances on shape and dimensions for cold rolled products.

BS 1471: 1972 Specification for Wrought Aluminium & Aluminium Alloys – Drawn Tube.

EN 515	Aluminium & aluminium alloys – Wrought products – Temper designations
EN 573-3	Aluminium & aluminium alloys – Chemical composition & form of wrought products. Part 3: Chemical composition
EN 573-4	Aluminium & aluminium alloys – Chemical composition & form of wrought products. Part 4: Forms of products
EN 754-1	Aluminium & aluminium alloys – Cold drawn rod/bar & tube. Part 1: Technical conditions for Inspection & Delivery
EN 754-2	Aluminium & aluminium alloys – Cold drawn rod/bar & tube. Part 2: Mechanical Properties
EN 754-7	Aluminium & aluminium alloys – Cold drawn rod/bar & tube. Part 7: Seamless tubes, tolerances on dimensions & form
EN 754-8	Aluminium & aluminium alloys – Cold drawn rod/bar & tube. Part 8: Porthole tubes, tolerances on dimensions & form

BS 1474:1987 Specification for Wrought Aluminium & Aluminium Alloys for General Engineering Purposes: Bars, Extruded Round Tubes and Sections.

EN 515	Aluminium & aluminium alloys – Wrought products – Temper designations
EN 573-3	Aluminium & aluminium alloys – Chemical composition & form of wrought products. Part 3: Chemical composition
EN 573-4	Aluminium & aluminium alloys – Chemical composition & form of wrought products. Part 4: Forms of products
EN 755-1	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 1: Technical conditions for Inspection & Delivery
EN 755-2	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 2: Mechanical Properties
EN 755-3	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 3: Round bars, tolerances on dimensions & form
EN 755-4	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 4: Square bars, tolerances on dimensions & form
EN 755-5	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 5: Rectangular bars, tolerances on dimensions & form
EN 755-6	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 6: Hexagonal bars, tolerances on dimensions & form.
EN 755-7	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 7: Seamless tubes, tolerances on dimensions & form.
EN 755-8	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 8: Porthole tubes, tolerances on dimensions & form.
EN 755-9	Aluminium & aluminium alloys – Extruded rod/bar, tube & profiles. Part 9: Profile, tolerances on dimensions & form
EN aaa-1	Aluminium & aluminium alloys – Extruded precision profiles in alloys. EN AW6060/EN AW 6063. Part 1: Technical conditions for Inspection & Delivery
EN aaa-2	Aluminium & aluminium alloys – Extruded precision profiles in alloys. EN AW6060/EN AW 6063. Part 2: Tolerances on dimensions & form.

BS 3900 Method of Tests for Paints

:1989	Part O	General Introduction
	Group C	Test associated with paint film formation
:1997	Part C5	Determination of film thickness = ISO 2808
	Group D	Optical tests on paint films
:1997	Part D5	Measurement of specular gloss of non metallic paint films @ 20°, 60° and 85° = DIN 67530 = ISO 2813:2000
	Group E	Mechanical tests on paint films
:1995	Part F6	Cross-cut test = SIO 2409:1995

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BS 4800:1989 BS EN ISO 9001:2000	Schedule of paint colours for building purposes Quality Management Systems – Requirements
BS 6496:1984	Powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes and for the finish on aluminium alloys extrusions, sheet and preformed sections coated with powder organic coatings.
BS 6497:1984	Powder organic coatings for application and stoving to hot-dip galvanized hot rolled steel sections and preformed steel sheet for windows and for the finish on galvanized steel sections and preformed sheet coated with powder organic coatings.
BS 7514:1989 BS EN 10143:1993	General criteria for suppliers' declaration of conformity = EN 45014 Continuously hot-dip metal coated steel sheet and strip. Tolerances on dimensions and shape.

The BRITISH BOARD OF AGRÉMENT DOCUMENTS referred to in work section Z31 are:

CERTIFICATES:

94/3041:1994	The SYNTHA PULVIN System Detail Sheet 1 Detail Sheet 2 Detail Sheet 4 Detail Sheet 5
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OTHER DOCUMENTS referred to in work section Z31 are:

British Coatings Federation:

Code of Safe Practice – Application of powder coatings by electrostatic spraying

MANUFACTURER'S TECHNICAL INFORMATION referred to in work section Z31 is:

2007 "The **SYNTHA PULVIN** system" Technical Manual.

The SYNTHA PULVIN Specification

Work Section A10 PRELIMINARIES: PROJECT PARTICULARS

GUIDANCE NOTES

- 111 THE PROJECT TITLE AND LOCATION
Complete the clause to describe the nature of the project and its location. If known, give the ordnance survey reference. See guidance notes to clause Z31/212

- 141 CONTRACT ADMINISTRATOR (CA):
This may be the Architect, Project Manager or other party. Insert contact name, company, address, phone and fax number

- 200 MAIN CONTRACTOR
Complete if and when known. Insert contact name, company, address, phone and fax number.

- 201 SUB-CONTRACTOR
The SYNTHA PULVIN powder coating applicator may not necessarily be a sub-contractor; this is largely dependent on whether he is also the metalwork fabricator, a number of companies have fully integrated extrusion/finishing/fabrication operations with SYNTHA PULVIN 'In-House User' status. The specifier may choose the SYNTHA PULVIN Applicator, or influence the choice, by the conditions set out in the Contract Preliminaries on Warranties and Quality Assurance. He may leave the choice to the Tenderer to allow competitive sub-tendering.
The choice may be down to the size of objects to be galvanized, pre-treated and/or coated and sizes of plant available at 'Approved Applicators' works.
Complete if and when known.
Insert contact name, company, address, phone and fax number.

- 220 FABRICATOR
Complete if and when known.
Insert contact name, company, address, phone and fax number.

- 230 APPROVED APPLICATOR
See also Guidance notes to A10/210 and Z31/214 & 221. Special equipment and expertise is required for the application of SYNTHA PULVIN powder coatings. It must be carried out by a specialist 'Approved Applicator' in factory conditions under a quality control system. See Guidance notes to clause A10/210.
Complete if and when known.
Insert contact name, company, address, phone and fax number.
A list of SYNTHA PULVIN 'Approved Applicators' is available on request from Valspar and may also be found on the 'SYNTHA PULVIN' website: www.synthapulvin.co.uk

SPECIFICATION CLAUSES

- 111 THE PROJECT TITLE AND LOCATION: _____
 A Project title:
 B Type of project:
 C Site Location:

- 141 CONTRACT ADMINISTRATOR (CA): _____
 A Contact Name:
 B Company:
 C Address:
 D Phone No:
 E Fax No:

- 200 MAIN CONTRACTOR: _____
 A Contact Name:
 B Company:
 C Address:
 D Phone No:
 E Fax No:

- 201 SUB CONTRACTOR
 A Contact Name:
 B Company:
 C Address:
 D Phone No:
 E Fax No:

- 220 FABRICATOR: _____
 A Contact Name:
 B Company:
 C Address:
 D Phone No:
 E Fax No:

- 230 APPROVED APPLICATOR: _____
 A Contact Name:
 B Company:
 C Address:
 D Phone No:
 E Fax No:

The SYNTHA PULVIN Specification

Work Section Z31 SUPERDURABLE POLYESTER POWDER COATING

GUIDANCE NOTES

121 POWDER COATING TO:

Repeat the clause as often as is necessary to cover each coating type, background or colour used, to indicate all variations. In each case add a revision letter or increase the number so each version of the clause has a unique number to help identify it when cross referencing e.g. 121A, 121B or 122, 123 etc. Describe the application in the title e.g. CURTAIN WALLING, DOORS etc.,

- A Select the relevant background and delete other. If both are used repeat the clause to describe each application.
- H Reference number defines type of finish, gloss level and colour.
- I Use to allow double checking of the reference number by all parties
- K Insert 40 for aluminium backgrounds, 60 for galvanized steel.
- L Select the relevant product and delete the other.

GENERAL WORKMANSHIP REQUIREMENTS

211 CONFORMITY REQUIREMENTS:

- A It is important to check if alternative coatings offered by the contractor meet all of the requirements of BS6496. See clause 245. Obtain a certificate of conformity or declaration of conformity. See clauses 216, 475 or 476.

212 GUARANTEE:

A 30 year guarantee will be given for all SYNTHA PULVIN MATT and SYNTHATEC METALLICS finishes in normal environments when requested (15 years for SYNTHA PULVIN GLOSS & SATIN).

Please refer to the Guarantee Section of the SYNTHA PULVIN Technical Manual.

Projects in marine or heavy industrial environments will be assessed separately for guarantee purposes.

Submit a pre-printed questionnaire with OS Map and site plans to Valspar for evaluation of terms of the Guarantee in marine and heavy industrial environments.

A copy of the pre-printed questionnaire can be found in the SYNTHA PULVIN Technical Manual or can be obtained separately from Valspar at the address given at the beginning of this specification. See Guide Notes to clause 242 & 531.

213 AGRÉMENT CERTIFICATE:

The application of the 'SYNTHA PULVIN System' by Approved Applicators is accredited with Agrément Certificate No: 94/3041. A copy of this certificate should be requested by the specifier. Copies are available from Valspar.

SPECIFICATION CLAUSES

Z31 SUPERDURABLE POLYESTER POWDER COATING

Clauses in work Z31 to be read with the Preliminaries A10-A55 and the Contract general conditions.

SUPERDURABLE POLYESTER POWDER COATING SYSTEMS

- 111 CLAUSES IN Z31: cover items general to all specification work sections dealing with galvanized mild steel or aluminium commodities to be polyester powder coated. They are to be read as part of those work sections.

121 SUPERDURABLE POWDER COATING TO: _____

- A Type: Polyester powder to BS6496 (Aluminium)
Polyester Powder to BS6497 (Galvanized steel)
- B Manufactured by an ISO 9001 (9002) certified company
- C Agrément Certificate No: 94/3041
- D Conformity requirement: See clause 211
- E Processing Conditions. See clause 320 & 321
- F Certificate of compliance. See clause 216 & 475
- G Guarantee requirements. See clause 212
- H Coating reference number: _____
- I Colour: _____
- J Gloss Level: 30%±7 units. See clause 248
- K Coating thickness: _____ microns. See clause 443
- L Reference: **SYNTHA PULVIN Matt or SYNTHATEC Metallics**
- M Manufacturer: Valspar Powder Coatings Ltd.

GENERAL WORKMANSHIP REQUIREMENTS

211 CONFORMITY REQUIREMENTS:

Ensure the product and its application conforms to all relevant requirements, restrictions and recommendations of:

- A BS 6496 (Aluminium)
- B BS 6497 (Galvanized Steel)
- C Agrément Certificate No. 94/3041
- D 'The SYNTHA PULVIN System' technical manual
- E The SYNTHA PULVIN Guarantee
- F British Coating Federation: Code of Safe Practice

212 GUARANTEE

Provide a guarantee for a period of 30 years to the CA for approval (15 years for SYNTHA PULVIN GLOSS & SATIN).

Ensure the coating work is carried out by the SYNTHA PULVIN 'Approved Applicator' in accordance with the requirements of the SYNTHA PULVIN Guarantee

213 AGRÉMENT CERTIFICATE:

Ensure the product and its application conforms to all relevant restrictions and recommendations of:

- Agrément Certificate No. 94/3041
- Provide a copy of the Agrément Certificate to the CA for approval.

216 **QUALITY CONTROL REPORT:**

A copy of the report can be found in the 'SYNTHA PULVIN system' Manual Appendix D. This report should be completed and attached to each declaration of conformity and sent with each delivery of coated materials. See clause 476.

221 **SYNTHA PULVIN APPROVED APPLICATOR:**

See SYNTHA PULVIN 'Approved Applicators' published by Valspar. See guidance notes to clause 214.

240A **TESTING & COMPARISONS WITH CONTROL SAMPLES:**

Where disputes arise as to whether the coating meets this specification, Valspar will carry out tests which will form the basis of a final decision.

241 **TESTING OF COATED COMPONENTS:**

B4 See clause 243.

214 **TENDER AND CONTRACT INFORMATION:**

Ensure the name of Valspar and the colour reference number(s) specified are on all documents, together with the name of the SYNTHA PULVIN 'Approved Applicator' when known.

215 **DOCUMENTATION**

Ensure all documents submitted to the 'Approved Applicator' clearly state the name of the Project / Development.

216 **QUALITY CONTROL REPORT:**

Supply to the CA when requested a copy of the quality control report from the 'Approved Applicator' verifying that the finish complies with the SYNTHA PULVIN process as defined in:

- A BS6496 (Aluminium)
- B BS6497 (Galvanized Steel)
- C 'The SYNTHA PULVIN system' Technical Manual
- D The British Board of Agrément Certificate No.94/3041 Attach to Declaration of Conformity. See clause 476.

221 **SYNTHA PULVIN APPROVED APPLICATOR:**

Ensure that the applicator:

- A is a SYNTHA PULVIN 'Approved Applicator'
- B complies fully with the SYNTHA PULVIN 'Product Performance and Applicator Requirements'

231 **SAMPLES:** submit representative samples of the following with the tender, obtain CA's approval prior to ordering any materials required for the works:

- A Coated samples of components to be used in the works showing various grades and forms of:
 - 1 Aluminium
 - 2 Galvanized mild steel
- B Colour(s) including attached information on:
 - 1 Colour name(s)
 - 2 Reference number(s)
 - 3 Gloss level(s)
 - 4 Product reference(s)
 - 5 Manufacturer's name

Retain sample panels until Contract Completion.

Ensure that delivered materials and coatings match samples. See also clause 325 & 441

SAMPLES AND TESTING

240A **TESTING AND COMPARISONS WITH CONTROL SAMPLES:**

In the event of any dispute contact Valspar to arbitrate.

241 **TESTING OF COATED COMPONENTS**

- A Whenever possible carry out testing on the actual components or suitable test pieces, in accordance with:
 - 1 The SYNTHA PULVIN 'Product Performance and Applicator Requirements' Section 2.4 "Quality Control Testing"
 - 2 BS6496 Parts 10.2-10.8 (Aluminium)
 - 3 BS6497 Parts 10.2-10.7 (Galvanized steel)
- B Where test pieces are not available, or are unsuitable for physical testing, use test panels as follows:
 - 1 Alloy designation as in BS6496 Part 13.1
 - 2 Galvanized steel to BS EN 10143 (formerly BS2989) as in BS6497 Part 13.1, 275 g/m²
 - 3 Sheet to be:
 - (a) 1 mm thick in aluminium
 - (b) 1.6 mm in galvanised steel
 - 4 Each to be coated to:
 - (a) 40 microns minimum (aluminium)
 - (b) 60 microns minimum (Galvanized steel)
- C Retain test pieces or panels. See clause 325

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242 FILM THICKNESS:

Every effort must be made to achieve the recommended film thickness on significant surfaces. See clause 431. Any item of work processed where the film thickness is out of specification is reject and must be stripped and reprocessed. This assessment is confined to significant surfaces and specified surfaces only i.e. those requiring coating to the full specification requirements. See clause 431.B

The agreed significant surfaces must be known to the tester and the relevant information be available to Valspar if required.

D2 & E3 Those surfaces with coating in excess of 120 microns will still be covered by the SYNTHA PULVIN Guarantee.

243 VISUAL APPEARANCE:

Inspection of the visual appearance is essential. The visual appearance may vary slightly according to the colour in use, therefore, the tester/inspector must have available a standard panel or extrusion of each colour coated to the specified film thickness for comparative appraisal.

Metallic colours shall be visually assessed for gloss and colour. Due to the 'light scattering' effect of these products, instrumental measurement may not give accurate results.

245 IMPACT TEST:

It is important to check this is achieved by any alternative product offered by the sub-contractor if different to that specified.

246 PRE-TREATMENT QUALITY:

Where disputes arise as to whether the coating meets this specification, Valspar will carry out tests which will form the basis of a final decision.

248 GLOSS LEVEL.

SYNTHATEC METALLICS colours produce a 'light scattering' effect and, for this reason, are best assessed visually in comparison with an approved sample. Though the 'base' (before addition of metallic) is manufactured to 30% gloss, instrumental measurement of the applied coating may not give accurate results.

BACKGROUNDS, COATINGS & MATERIAL COMPATIBILITY

251 MATERIAL TO BE COATED:

Aluminium:

BS1470: alloy 1200 or 3103

BS1471: alloy 6063

BS1474: alloy 6063 TE or TF

European alloys:

BS EN 485: Parts 1, 3 & 4: alloys EN AW 1200 or EN AW 3103

BS EN 754: Parts 1,2,7 & 8: alloy EN AW 6063

BS EN 755: Parts 2-9: alloy EN AW 6063

Each with:

BS EN515

BS EN573: parts 1 & 4 (draft),

Galvanized steel to:

BS729

BS2989 (replaced by BS EN10143)

BS EN10143 (formerly BS2989).

Suitably protect materials prior to coating as to avoid scratches and blemishes which would be visible through the coating.

242 FILM THICKNESS:

Test the coated test pieces or panels in accordance with:

A ISO 2508:1997

B BS6496 Part 10.5 (Aluminium)

C BS6497 Part 10.5 (Galvanized steel)

D Requirement on test panels: see BS6496 and 6497

243 VISUAL APPEARANCE:

Test the coated test piece or panel(s) in accordance with:

A BS6496 Parts 10.2, 10.3 & 10.4 (Aluminium)

B BS6497 Parts 10.2, 10.3 & 10.4 (Galvanized steel)

C Compare the work with an approved sample standard panel or extrusion of each colour coated to the specified film thickness for comparative appraisal. See clause 441.

244 ADHESION:

Test the coated test piece of panel(s) in accordance with the procedure described in:

A BS3900:Part E6 Cross hatch test, using 2mm parallel cuts,

B BS6496 Part 10.6 (Aluminium only)

C BS6497 Part 10.6 (Galvanized steel)

D Value required: Co-efficient zero, 100% adhesion

245 IMPACT TEST:

Test the coated test piece or panel(s) in accordance with:

A BS6496: Part 16.1, Test to 20"/lb or 23 cm/kg

B BS6496 Part 10.7 (Aluminium only)

C Cracking of the finish or any detachment of film from the substrate at this test level will constitute failure.

246 PRE-TREATMENT QUALITY:

Test the coated test piece or panel(s) in accordance with:

A BS6496 Part 10.8 (Aluminium)

B BS6497 Part 10.7 (Galvanized steel)

C Test by pressure cooker described in BS6496 Clause 17

D Any blistering except within 3 mm of any edge will constitute failure.

248 GLOSS LEVEL:

Test the coated test piece or panel(s) in accordance with:

A ISO 2813:1993

B BS6496: Part 10.4 (Aluminium)

C BS6497: Part 10.4 (Galvanized steel)

D Required gloss level: 30% ± 7 units at 60 degrees

E See clause 240A

BACKGROUNDS, COATINGS & MATERIAL COMPATIBILITY

251 MATERIAL TO BE COATED

A Ensure the substrates to be coated with the SYNTHA PULVIN system are made from materials to the appropriate British Standard(s)

B Ensure the materials and alloys are all in a suitable condition for the application of the SYNTHA PULVIN System and are able to withstand curing temperatures of approx 200 degrees Centigrade.

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260 SEALANT COMPATIBILITY

Where sealants are used these are to be of a colour agreed with the CA.

PREPARATION OF SURFACES

320 PROCESSING CONDITIONS: PRE TREATMENT:

See clause 246 for test method.

325 RETENTION OF RECORDS:

The correct pre-treatment procedure will automatically be carried out when work is processed by SYNTHA PULVIN 'Approved Applicator' Details of the chemical process can be found in the 'SYNTHA PULVIN System': 'Product Performance and Applicator Requirements'.

PREPARATION OF SURFACES

APPLICATION OF POWDER COATINGS

431 SIGNIFICANT SURFACES

Any item of work processed where the minimum film thickness is out of specification is reject and must be stripped and reprocessed.

This assessment is confined to significant surfaces and specified surfaces only i.e. those requiring coating to the full specification requirements.

The agreed significant surface must be known to the tester and the relevant information be available to Valspar if required

C The SYNTHA PULVIN colour reference must be clearly marked on the drawings.

260 SEALANT COMPATIBILITY

Obtain written confirmation from the sealant manufacturer as to their suitability for use in conjunction with the 'SYNTHA PULVIN System'

Use the products from the manufacturers list in SYNTHA PULVIN Technical Advisory Sheet No.10: 'Sealants & Mastics for use with the SYNTHA PULVIN System'.

320 PROCESSING CONDITIONS: PRE TREATMENT:

Ensure all material is pre-treated in full accordance with the requirements of the SYNTHA PULVIN process.

321 PROCESSING CONDITIONS: COATING:

- A Ensure the finish meets the criteria laid down by Valspar
 - 1 The 'SYNTHA PULVIN System' Technical Manual: 'Product Performance and Applicator Requirements'
- B Ensure the finish conforms in all respects with BS6496 (Aluminium) or BS6497 (Galvanized steel)
- C The SYNTHA PULVIN 'Approved Applicator' must ensure that the curing schedule is achieved when processing the component(s), as laid down by Valspar
- D Ensure the cured finish is equivalent to the colour control samples
- E Ensure the colour control samples are available when requested by the CA

325 RETENTION OF RECORDS:

Retain test panels, report forms and process control records for the period for the guarantee and make them available for inspection by the CA or any nominated persons prior to fixing of the fabricated products and throughout the guarantee period.

APPLICATION OF POWDER COATINGS

431 SIGNIFICANT SURFACES

- A Supply drawings with the components to be coated with SYNTHA PULVIN
- B Clearly mark which surfaces are the 'significant surfaces'
 - 1 All visible surfaces
 - 2 Other surfaces that require a 'full coating'
- C Indicate SYNTHA PULVIN MATT, SYNTHATEC METALLICS or SYNTHA PULVIN GLOSS & SATIN colour reference and thickness
- D Sliding fittings or other areas where a high coating thickness which may cause tolerance problems must be clearly indicated
- E Obtain approval from the CA before commencing coating

432 JIGGING POINTS, VENTING AND DRAINAGE HOLES:

- A No areas of uncoated metal will be accepted on 'significant surfaces' under any circumstances.
- B In any area where coating is carried out after machining, satisfactory jiggling points must be agreed in advance between the fabricator and applicator
- C Provide pre-treatment and galvanizing venting and drain holes where necessary
- D Obtain agreement of all parties for the location of all jiggling, vent and drain holes.
- E Wherever possible ensure drainage holes are in unseen areas, but in positions to give the most satisfactory result
- F Ensure holes are in areas that will not weaken joints, sections or assemblies.

Submit representative sample(s) of component(s) and section(s) with the tender for CA's approval.

Samples must show design characteristics in relation to pre-treatment and galvanizing drainage and jiggling points.

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441 APPEARANCE:

- A** Inspection of the visual appearance is essential. The visual appearance may vary slightly according to the colour in use, therefore, the tester/inspector must have available a standard panel or extrusion of each colour coated to the specified film thickness for comparative appraisal.
- B** This practice ensures all parties are fully aware before the work starts of what is acceptable and what can be consistently achieved during normal production.

442 COLOUR AND GLOSS LEVEL:

See clauses 243 & 248 for test methods and guidance on metallic products.

443 COATING THICKNESS:

A Insert the clause number of the last of the clauses based on clause 121 describing the applications. Every effort must be made to achieve the recommended film thickness on significant surfaces. This assessment is confined to significant surfaces and specified surfaces only i.e. those requiring coating to the full specification requirements. The agreed significant surface must be known to the tester and the relevant information be available to Valspar if required. The SYNTHA PULVIN Guarantee will not cover any area of coated metal that is over-coated. Where the SYNTHA PULVIN film thickness on a significant surface of any item of processed work does not meet the minimum film thickness, it will be rejected and must be stripped and reprocessed. Stripping, reprocessing and recoating of rejects is an acceptable alternative to disposal of components and will be eligible for the SYNTHA PULVIN Guarantee. See clause 531.

DELIVERY CERTIFICATION:

476 DECLARATION OF CONFORMITY:

B See Clause 216. A standard form is included in the 'SYNTHA PULVIN' Manual, Appendix D. It can be completed and attached to the Declaration of Conformity.

441 APPEARANCE:

- A** Ensure all visible finished surfaces are free from blisters, craters, pinholes or scratches when viewed with normal or corrected vision from a distance of 1 metre.
- B** Submit samples complying in all respects to the 'SYNTHA PULVIN System' illustrating the surface appearance when required, for signed approval of the CA before any coating work commences.

442 COLOUR AND GLOSS LEVEL:

- A** Ensure the finish of the SYNTHA PULVIN coated products match the samples supplied by Valspar and held by the CA
- B** See clause 243 for testing colour values & clause 248 on testing gloss levels
- C** In the event of any dispute contact Valspar to arbitrate

443 COATING THICKNESS:

- A** Ensure the SYNTHA PULVIN coating has a minimum continuous film thickness on all specified surfaces of:
- 1 40 microns on Aluminium
 - 2 60 microns on Galvanized steel, unless specified otherwise, see clause(s) 121 _____
- B** No double coating of processed work will be accepted as this invalidates the SYNTHA PULVIN Guarantee.

455 FABRICATION REQUIREMENTS:

- A** Fabrications may be from:
- 1 pre coated stock lengths of metal cut after coating
 - 2 pre cut lengths coated after cutting, at the recommendation of the fabricator to suit the environmental conditions.
- B** State in the tender which method is to be adopted, for CA approval

DELIVERY CERTIFICATION

475 CERTIFICATE OF COMPLIANCE:

Supply to the CA when requested a Certificate of compliance to:

A BS6496: Part 11 (Aluminium)

B BS6497: part 11 (Galvanized steel)

C The 'SYNTHA PULVIN System' Technical Manual

D British Board of Agrément Certificate No.94/3041

E The SYNTHA PULVIN Specification

See also clauses 216 & 476.

476 DECLARATION OF CONFORMITY:

- A** Ensure that all relevant specifications are submitted to manufacturers or suppliers and/or standards to be achieved are stated in purchase orders.
- B** Indicate that a declaration of conformity to BS EN 45014:1998 will be required with the deliveries, with any test results attached,
- C** Obtain evidence of currency of certificates from the issuing agency for commodities carrying product or system quality marks e.g. BBA Certificate(s)
- D** Collect together (and/or obtain) and provide all declaration of conformity or other evidence supplied with each delivery, for inclusion in Operating and Maintenance manuals, to the CA to forward to the Employer.

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INSTALLATION

481 PROTECTION AFTER COATING:

Powder coated surfaces may be damaged during handling, fixing or by other building operations and therefore should be fully protected until completion of all other work in the area of the installation.

A list of tape suppliers who have a range of products which are commonly used on the SYNTHA PULVIN coated components is available on request from Valspar and is contained in the 'SYNTHA PULVIN System' Technical Manual – Technical Advisory Sheet No.9

PROTECTION AND MAINTENANCE

512 PROTECTION DURING AND AFTER FIXING:

It is possible that damage may occur to the SYNTHA PULVIN coated surface during handling, fixing or by other building processes carried out nearby. To reduce the risk of damage to SYNTHA PULVIN, coated surfaces should be fully protected until completion of all other work in the area of the installation.

A list of tape suppliers who have a range of products which are commonly used on the SYNTHA PULVIN coated components is available on request from Valspar and is contained in the 'SYNTHA PULVIN system' Technical Manual – Technical Advisory Sheet No. 9

513 REMOVAL OF PROTECTIVE TAPES:

See the 'SYNTHA PULVIN System' Technical Manual, Technical Advisory Sheet 9.

531 RECTIFICATION OF DAMAGE:

Over coating with repair system is unacceptable as it invalidates the SYNTHA PULVIN Guarantee. See clause 212 & 242. Stripping, reprocessing and recoating of rejects is an acceptable alternative to disposal of components and will be eligible for the guarantee.

Site rectification is not covered by the SYNTHA PULVIN Guarantee.

541 CLEANING DOWN:

The SYNTHA PULVIN Customer Care Manual is available upon request from Valspar or the Approved Applicator.

This clause may need to be modified to reflect the parties involved in the contract and the procurement method adopted on the Project.

Take care to ensure this clause does not contradict any clause in the preliminaries or contract.

550 MAINTENANCE OF THE SYNTHA PULVIN SYSTEM:

The SYNTHA PULVIN Customer Care Manual is available upon request from the Approved Applicator or direct from Valspar.

INSTALLATION

481 PROTECTION AFTER COATING:

Ensure the **SYNTHA PULVIN** coated surfaces are taped or otherwise protected and the following recommendations shall be adopted:

- A Ensure protective tapes are applied by the fabricator or manufacturer.
- B Ensure the **SYNTHA PULVIN** coated surfaces to which they are applied are free from dirt, oil, cement or other surface contaminants.
- C If necessary clean the surfaces using a soft cloth dampened with white spirit.
- D The surface must be dry before tape application
- E Fully protect the **SYNTHA PULVIN** coated surfaces which are likely to be damaged during handling or fixing. See also clause 512.

PROTECTION AND MAINTENANCE

512 PROTECTING DURING AND AFTER FIXING:

Ensure the **SYNTHA PULVIN** coated surfaces are taped or otherwise protected and the following recommendations shall be adopted:

- A Fully protect the **SYNTHA PULVIN** coated surfaces which are likely to be damaged during handling, fixing or by other building processes being carried out nearby until completion of all other work in the area of the installation.
- B If during fixing any tape is removed from the components, renew it afterwards and leave in position.
 - 1 for up to a further 6 months
 - 2 until final removal when instructed by the Main Contractor. Ensure tapes are removed at the end of a period not exceeding 6 months.
- C Apply new tapes if further protection is required after the 6 months. See clause 481 Items B-D.

513 REMOVAL OF PROTECTIVE TAPES:

- A Do not allow tapes to remain on the **SYNTHA PULVIN** coated surface for longer than 6 months.
- B Where necessary, remove any residual adhesive left on the **SYNTHA PULVIN** coating following removal of the protective tapes by wiping with a white spirit dampened cloth.
- C Solvents or cleaning solutions containing esters, ketones, chlorinated hydrocarbons or alcohols must not be used, as these will be detrimental to the coating.

531 RECTIFICATION OF DAMAGE:

- A During fixing, glazing or sealant work, rectify any damage that occurs immediately, do not leave until the end of the installation.
- B Only carry out site rectification of damage with the CA's prior approval and in accordance with the recommendations in **SYNTHA PULVIN** Technical Advisory Sheet No: 13: **SYNTHA PULVIN** Remedial Systems.
- C Remove and replace damaged panels or remove, strip and recoat damaged coating.

541 CLEANING DOWN:

- A Ensure the sub-contractor maintains the **SYNTHA PULVIN** coated components until practical completion, after which protection will be the Main Contractor's responsibility until hand-over.
- B Liaise with the Main Contractor to ensure that other sub-contractors cannot damage the work prior to practical completion and thereafter until handover.
- C Ensure cleaning down is carried out in accordance with the **SYNTHA PULVIN** System Customer Care Manual and the **SYNTHA PULVIN** Guarantee.

550 MAINTENANCE OF THE SYNTHA PULVIN SYSTEM

Ensure the appointed sub-contractor supplies copies of the **SYNTHA PULVIN** System Customer Care Manual to the Main Contractor covering cleaning and maintenance of the coated surfaces.

END OF WORK SECTION Z31

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VALSPAR POWDER COATINGS LTD DISCLAIMER

The information given in this document is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this document and without prior arrangement with Valspar does so at his own risk. Please contact Valspar for further information about the product.

Whilst we endeavour to ensure that all information and advice we give about the product (whether in this document or otherwise) is correct, it is liable to modification from time to time in the light of our experience and our policy of continuous product development. We specifically draw your attention to the fact that we have no control over the quality or condition of the substrate or many factors affecting the use and application of the product, and accordingly we cannot accept liability for any loss or damage by them.

We provide a guarantee for the product, as set out in this letter, and we acknowledge our liability for death or personal injury caused by our negligence, and any liability under the Consumer Protection Act 1987. We do not however accept any other liability, whether for negligence, failure of the product to be of merchantable quality or fit for any particular purpose, misrepresentation, or otherwise, howsoever, and subject to the foregoing we shall under no circumstances be liable for any consequential or indirect loss or damage, including loss of business or profits.

VALIDITY DATE: It is a company policy to update this product documentation when necessary.

SYNTHA PULVIN IS A UK REGISTERED TRADEMARK OF VALSPAR CORPORATION.