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**Agrément
Certificate
No 94/3041**
Third issue*

Designated by Government
to issue
European Technical
Approvals

THE SYNTHA PULVIN/SYNTHATEC SYSTEMS

Revêtement à base de matières plastiques
Kunststoffbeschichtung

Product



Application of Synthapulvin Plus Metallic (RAL 9006)


• THIS CERTIFICATE REPLACES CERTIFICATE No 88/2028 AND RELATES TO THE SYNTHA PULVIN/SYNTHATEC SYSTEMS, POLYESTER POWDER COATING SYSTEMS FOR ALUMINIUM AND GALVANIZED STEEL WINDOW FRAMES, CURTAIN WALLING AND ROOFING OR CLADDING PANELS.

• The systems are applied in an industrial process by specialist coating companies approved and under surveillance by the Certificate holder.

These Front Sheets must be read in conjunction with the accompanying Detail Sheets, which provide information specific to coating type.

Regulations — Detail Sheet 1

1 The Building Regulations 2000 (England and Wales)

 In the opinion of the British Board of Agrément, the use of The Synthapulvin/Synthatec Systems on window frames is not subject to these Regulations. The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of roofing and cladding with the Building Regulations. In the opinion of the BBA, Synthapulvin coated aluminium and galvanized steel roofing and cladding panels, if used in accordance with the provisions of this Certificate, will meet the relevant requirements.

Requirement: B4	External fire spread
Comment:	The products meet this Requirement. See sections 3.1 to 3.3 of the relevant Detail Sheet.
Requirement: Regulation 7	Materials and workmanship
Comment:	The products are acceptable. See section 6 of the relevant Detail Sheet.

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2 The Building Standards (Scotland) Regulations 1990 (as amended)



In the opinion of the BBA, The Syntha Pulvin/Synthatec Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation:	10	Fitness of materials
Standard:	B2.1	Selection and use of materials and components
Comment:		The products are acceptable. See section 6 of the relevant Detail Sheet.
Regulation:	12	Structural fire precautions
Standard:	D6.7	Roofs and rooflights
Comment:		The products are unrestricted by this Standard. See section 3.3 of the relevant Detail Sheet.

3 The Building Regulations (Northern Ireland) 1994 (as amended)



In the opinion of the BBA, The Syntha Pulvin/Synthatec Systems, if used in accordance with the provisions of this Certificate, will satisfy the various Building Regulations as stated below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The products are acceptable. See section 6 of the relevant Detail Sheet.
Regulation:	E8	External fire spread
Comment:		The products are unrestricted under this Regulation. See sections 3.1 to 3.3 of the relevant Detail Sheet.

4 Construction (Design and Management) Regulations 1994

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: *7 Delivery and site handling of these Front Sheets (7.3).*

Technical Specifications

5 Description

5.1 The Syntha Pulvin/Synthatec Systems are decorative/protective polyester powder coatings for application to window frames, curtain walling or roofing/cladding panels.

5.2 The products are applied only by specialist contractors that have been assessed by the Certificate holder and found to meet the requirements for Syntha Pulvin/Synthatec Approved Applicator status.

5.3 These companies are regularly inspected on behalf of the Certificate holder to ensure that the application complies with the specification. The Certificate holder retains the right to withdraw approval from any applicator.

5.4 The products are available in a wide range of colours, details of which are available from the manufacturer.

5.5 Suitable substrates for Syntha Pulvin/Synthatec coatings are aluminium to:

- BS EN 573-3 : 1995
- BS EN 573-4 : 1995
- BS 1474 : 1987
- BS EN 1676 : 1997

or galvanized steel to:

- BS EN ISO 1461 : 1999
- BS EN 10142 : 2000
- BS EN 10147 : 2000.

5.6 The powders are manufactured by blending resin and pigments and passing through a hot melt extrusion process, followed by grinding to a specific particle size.

5.7 Articles to be coated are given an appropriate pretreatment, dried, electrostatically sprayed with the Syntha Pulvin/Synthatec powder and heat cured.

6 Quality control

6.1 Quality control tests are carried out by the Certificate holder on each batch of material produced. Samples are sprayed with the product and the ultimate properties tested.

6.2 Approved Applicator status requires each applicator to prepare at least four samples per production line for test and reference at four-hourly intervals. The samples are physically tested at the applicator's works and a report, with duplicate panels, is sent to the Certificate holder.

6.3 Regular inspections of Approved Applicators' premises are carried out by the Certificate holder to ensure that the quality is being maintained.

7 Delivery and site handling

7.1 Syntha Pulvin/Synthatec coated components are packaged by the applicator to avoid damage in handling prior to installation.

7.2 Storage on site should follow good practice and be in a sheltered position, away from the possibility of impact and abrasion.

7.3 Coated articles should be handled in accordance with the Manual Handling Operations Regulations 1992.

Design Data

8 General

8.1 The Syntha Pulvin/Synthatec Systems are satisfactory for application in an industrial process to aluminium and galvanized steel by Approved Applicators of the Certificate holder.

8.2 Window frames, curtain walling and cladding or roofing panels suitable for use in any normal situation or location, designed in accordance with BS 4873 : 1986, BS 6510 : 1984 or BS 8200 : 1985, can be manufactured using Syntha Pulvin/Synthatec coatings.

8.3 The advice of the manufacturer should be sought where the products are to be installed in corrosive environments.

9 Compatibility

9.1 To prevent bimetallic corrosion, direct contact of the uncoated side of the substrate with other metals should be avoided. Fixing devices must be of the same material as, or compatible with, the substrate. Precautions must also be taken to avoid direct contact of the uncoated side with timber treated with a fire retardant or preserved with copper or fluoride compounds.

9.2 Coated components are not affected by contact with fresh mortar, sealants, glazing compounds or window-cleaning materials. Fully coated components may be embedded in mortar.

10 Maintenance

10.1 A Syntha Pulvin/Synthatec coated installation can be cleaned by hosing with water, using mild detergent, and rinsing.

10.2 In polluted atmospheres it may be necessary to clean the coating at regular intervals to maintain appearance. Normal precautions in building design must be taken to shed water clear of the coating to prevent marking the surface.

10.3 Should a coated cladding or roofing panel have to be replaced, some fading of colour may be visible although the difference between new and existing panels should be acceptable under normal circumstances.

10.4 Remedial paint systems are available for the on-site repair of accidental damage to the

coatings. The manufacturer should be consulted regarding suitable over-coating systems.

Installation

11 Procedure

11.1 Syntha Pulvin/Synthatec coated window frames are installed in accordance with the window frame manufacturer's instructions and generally with BS 8213-4 : 1990 and may be pointed using a silicone, polyurethane (foam or conventional) or polysulphide sealant.

11.2 Coated cladding panels are installed generally in accordance with BS 8200 : 1985.

Additional Information

The management systems of H B Fuller Coatings Ltd have been assessed and registered as meeting the requirements of BS EN ISO 9001 : 1994 by the British Standards Institution Quality Assurance (Certificate No FM 936).

Bibliography

- BS 1474 : 1987 *Specification for wrought aluminium and aluminium alloys for general engineering purposes: bars, extruded round tubes and sections*
- BS 4873 : 1986 *Specification for aluminium alloy windows*
- BS 6510 : 1984 *Specification for steel windows, sills, window boards and doors*
- BS 8200 : 1985 *Code of practice for design of non-loadbearing external vertical enclosures of buildings*
- BS 8213 *Windows, doors and rooflights*
- BS 8213-4 : 1990 *Code of practice for the installation of replacement windows and doorsets in dwellings*
- BS EN 573 *Aluminium and aluminium alloys. Chemical composition and form of wrought products*
- BS EN 573-3 : 1995 *Chemical composition*
- BS EN 573-4 : 1995 *Forms of products*
- BS EN 1676 : 1997 *Aluminium and aluminium alloys. Alloyed ingots for remelting. Specifications*
- BS EN 10142 : 2000 *Continuously hot-dip zinc coated low carbon steels strip and sheet for cold forming. Technical delivery conditions*
- BS EN 10147 : 2000 *Continuously hot-dip zinc coated structural steels strip and sheet. Technical delivery conditions*
- BS EN ISO 1461 : 1999 *Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods*
- BS EN ISO 9001 : 1994 *Quality systems. Model for quality assurance in design, development, production, installation and servicing*

Conditions of Certification

12 Conditions

12.1 This Certificate:

- (a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;
- (b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;
- (c) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;
- (d) is copyright of the BBA.

12.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

12.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

- (a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked by the BBA or its agents; and

(c) are reviewed by the BBA as and when it considers appropriate.

12.4 In granting this Certificate, the BBA makes no representation as to:

- (a) the presence or absence of any patent or similar rights subsisting in the product or any other product;
- (b) the right of the Certificate holder to market, supply, install or maintain the product; and
- (c) the nature of individual installations of the product, including methods and workmanship.

12.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.



In the opinion of the British Board of Agrément, The Syntha Pulvin/Synthatec Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 94/3041 is accordingly awarded to H B Fuller Coatings Ltd.

On behalf of the British Board of Agrément

Date of Third issue: 2nd March 2001

Chief Executive

**Original Certificate issued 18th July 1994. This amended version includes a change of name of Certificate holder, updated titles to the national Regulations and updated Standards and new Conditions of Certification.*



H B Fuller Coatings Ltd

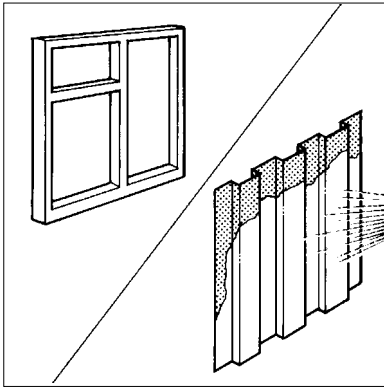
Certificate No 94/3041

DETAIL SHEET 2

Second issue*

SYNTHA PULVIN/SYNTHATEC

Product



• THIS DETAIL SHEET RELATES TO SYNTHA PULVIN/SYNTHATEC, A POLYESTER POWDER COATING SYSTEM FOR ALUMINIUM AND GALVANIZED STEEL WINDOW FRAMES, CURTAIN WALLING AND ROOFING OR CLADDING PANELS.

• The product must be applied and installed in accordance with the conditions set out in the Front Sheets of this Certificate.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Syntha Pulvin/Synthatec is a decorative/protective polyester powder coating for application to window frames, curtain walling or roofing/cladding panels.

1.2 The product is available in a standard range of colours in gloss, satin or matt finishes, details of which are available from the manufacturer. Other colours can be produced to clients' requirements, after an investigation to ensure colour stability.

1.3 Syntha Pulvin/Synthatec has a minimum cured coating thickness of 40 µm on aluminium and 60 µm on galvanized steel. Where an aluminium component is to be installed in a particularly corrosive environment, such as coastal locations or swimming pools, consideration should be given to increasing the minimum coating thickness to 60 µm.

Design Data

2 General

Syntha Pulvin/Synthatec is satisfactory for application in an industrial process to aluminium and galvanized steel by Approved Applicators of H B Fuller Coatings Ltd.

3 Performance in fire

3.1 When tested to BS 476 : Part 6 : 1968, a Syntha Pulvin/Synthatec coating achieved an overall index of performance (I) of 1.2 and a sub-index (i_1) of 0.

3.2 When tested to BS 476 : Part 7 : 1971, a Syntha Pulvin/Synthatec coating had a Class 1 surface. Therefore the product has a Class 0 surface as defined in the various national Building Regulations.

3.3 When tested to BS 476 : Part 3 : 1958, a 50 µm to 60 µm thick Syntha Pulvin/Synthatec coating on 1.6 mm thick aluminium achieved an EXT.S.AA rating.

4 Location

The coating is tough and abrasion resistant, making the product suitable for use at low level in areas readily accessible to the public (eg alongside pedestrian thoroughfares and playing fields) where accidental damage is possible. Thus Syntha Pulvin/Synthatec coated products are suitable for use in category B (and less vulnerable) situations, as described in BS 8200 : 1985, Table 2, reproduced (in part) in Table 1.

Table 1 Location areas

Category	Description	Examples	
B	Readily accessible to public and others with little incentive to exercise care. Chances of accident occurring and of misuse	Walls adjacent to pedestrian thoroughfares or playing fields when not in category A	} Zone of wall up to 1.5 m above pedestrian or floor level.
C	Accessible primarily to those with some incentive to exercise care. Some chance of accident occurring and misuse	Walls adjacent to private open gardens Back walls of balconies	
D	Only accessible, but not near a common route, to those with high incentive to exercise care. Small chance of accident occurring or of misuse	Walls adjacent to small fenced decorative garden with no through paths or floor	
E	Above zone of normal impacts from people but liable to impacts from thrown or kicked objects	1.5 m to 6 m above pedestrian or floor level in public areas	
F	Above zone of normal impacts from people and not liable to impacts from thrown or kicked objects	Wall surfaces at higher positions than those defined in E above	

5 Maintenance

5.1 A remedial paint system is available for on-site repair of accidental damage to the coating, and for matching colours on fastenings, etc. Further details can be obtained from H B Fuller Coatings Ltd.

5.2 The installation should be maintained by regular washing down, in accordance with sections 10.1 and 10.2 of the Front Sheets of this Certificate and the manufacturer's instructions.

6 Durability



Syntha Pulvin/Synthatec coated on galvanized steel or aluminium cladding, curtain walling, roofing or window frames will perform effectively with a life expectancy exceeding 30 years. It will have an anticipated decorative life of 15 years in heavily polluted areas and 20 years in other areas.

As part of the assessment leading to the issue of previous Certificates, the following tests and investigations were carried out.

7 Tests

7.1 Syntha Pulvin/Synthatec coated aluminium and galvanized steel panels were subjected to tests to determine:

scratch resistance
cross-hatch adhesion
abrasion resistance (Taber)
impact resistance
effect of artificial weathering
effect of salt spray
effect of high humidity
ease of cleaning
mortar resistance
resistance to chemicals, marking and staining.

7.2 An assessment was made of independent test data relating to:

fire propagation
surface spread of flame
fire exposure roof rating.

8 Other investigations

8.1 Visits were made to Approved Applicators to assess their methods of quality control.

8.2 Details of the procedures adopted by H B Fuller Coatings Ltd for control over their Approved Applicators were examined.

8.3 A user survey and a visit to an established site were conducted to evaluate performance in use.

8.4 An assessment of the applicators' coating processes was made to confirm compliance with BS 6496 : 1984(1991) and BS 6497 : 1984(1991).

8.5 A re-examination was made of the data and investigations on which the previous Certificate was based. The original conclusions remain valid.

8.6 Regular factory inspections have been carried out to ensure that quality is being maintained.

Bibliography

BS 476 *Fire tests on building materials and structures*

Part 3 : 1958 *External fire exposure roof test*

Part 6 : 1968 *Fire propagation test for building materials*

Part 7 : 1971 *Surface spread of flame tests for materials*

BS 6496 : 1984(1991) *Specification for 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 alloy extrusions, sheet and preformed sections coated with powder organic coatings*

BS 6497 : 1984(1991) *Specification for powder organic coatings for application and stoving to hot-dip galvanized hot-rolled steel sections and preformed steel sheet for windows and associated external architectural purposes, and for the finish on galvanized steel sections and preformed sheet coated with powder organic coatings*

BS 8200 : 1985 *Code of practice for design of non-loadbearing external vertical enclosures of buildings*



On behalf of the British Board of Agrément

Date of Second issue: 12th February 1998

Director

**Original Detail Sheet issued 18th July 1994. This amended version includes a change of name of Certificate holder.*

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H B Fuller Coatings Ltd

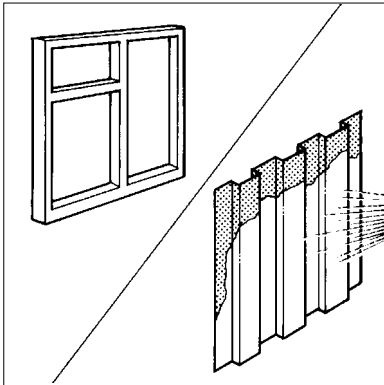
Certificate No 94/3041

DETAIL SHEET 4

Second issue*

SYNTHA PULVIN PLUS/SYNTHATEC PLUS

Product



• THIS DETAIL SHEET RELATES TO SYNTHA PULVIN PLUS/SYNTHATEC PLUS, A MODIFIED POLYESTER POWDER COATING SYSTEM FOR ALUMINIUM AND GALVANIZED STEEL WINDOW FRAMES, CURTAIN WALLING AND ROOFING OR CLADDING PANELS.

• The product must be applied and installed in accordance with the conditions set out in the Front Sheets of this Certificate.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Syntha Pulvin Plus/Synthatec Plus is a decorative/protective modified polyester powder coating for application to window frames, curtain walling or roofing/cladding panels.

1.2 The product is available as a matt finish in a standard range of colours (including metallics), details of which are available from the manufacturer. Other colours can be produced to clients' requirements, after an investigation to ensure colour stability.

1.3 Syntha Pulvin Plus/Synthatec Plus has a minimum cured coating thickness of 40 µm on aluminium and 60 µm on galvanized steel. Where an aluminium component is to be installed in a particularly corrosive environment, such as coastal locations or swimming pools, consideration should be given to increasing the minimum coating thickness to 60 µm.

Design Data

2 General

Syntha Pulvin Plus/Synthatec Plus is satisfactory for application in an industrial process to aluminium and galvanized steel by Approved Applicators of H B Fuller Coatings Ltd.

3 Performance in fire

3.1 When tested to BS 476 : Part 6 : 1989, a Syntha Pulvin Plus/Synthatec Plus coating achieved an overall index of performance (I) of 0.0.

3.2 When tested to BS 476 : Part 7 : 1987, a Syntha Pulvin Plus/Synthatec Plus coating had a

Class 1 surface. Therefore the product has a Class 0 surface as defined in the various Building Regulations.



3.3 When tested to BS 476 : Part 3 : 1958, a 50 µm to 70 µm thick Syntha Pulvin Plus/Synthatec Plus coating on 3.0 mm thick aluminium achieved an EXT.S.AA rating.

4 Location

The coating is tough and abrasion resistant, making the product suitable for use at low level in areas readily accessible to the public (eg alongside pedestrian thoroughfares and playing fields) where accidental damage is possible. Thus Syntha Pulvin Plus/Synthatec Plus coated products are suitable for use in category B (and less vulnerable) situations, as described in BS 8200 : 1985, Table 2, reproduced (in part) in Table 1.

Table 1 Location areas

Category	Description	Examples
B	Readily accessible to public and others with little incentive to exercise care. Chances of accident occurring and of misuse	Walls adjacent to pedestrian thoroughfares or playing fields when not in category A
C	Accessible primarily to those with some incentive to exercise care. Some chance of accident occurring and misuse	Walls adjacent to private open gardens Back walls of balconies
D	Only accessible, but not near a common route, to those with high incentive to exercise care. Small chance of accident occurring or of misuse	Walls adjacent to small fenced decorative garden with no through paths or floor
E	Above zone of normal impacts from people but liable to impacts from thrown or kicked objects	1.5 m to 6 m above pedestrian or floor level in public areas
F	Above zone of normal impacts from people and not liable to impacts from thrown or kicked objects	Wall surfaces at higher positions than those defined in E above

Zone of wall up to 1.5 m above pedestrian or floor level.

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5 Maintenance

5.1 A remedial paint system is available for on-site repair of accidental paint damage to the coating, and for matching colours on fastenings, etc. Further details can be obtained from H B Fuller Coatings Ltd.

5.2 The installation should be maintained by regular washing down, in accordance with sections 10.1 and 10.2 of the Front Sheets of this Certificate and the manufacturer's instructions.

6 Durability



Syntha Pulvin Plus/Synthatec Plus coated on galvanized steel or aluminium cladding, curtain walling, roofing or window frames will perform effectively with a life expectancy exceeding 30 years. It will have an anticipated decorative life of 20 years in heavily polluted areas and 25 years in other areas.

Technical Investigations

The following is a summary of the technical investigations carried out on Syntha Pulvin Plus/Synthatec Plus.

7 Tests

7.1 Syntha Pulvin Plus/Synthatec Plus coated aluminium and galvanized steel panels were subjected to tests to determine:

scratch resistance
cross-hatch adhesion
abrasion resistance (Taber)
impact resistance
effect of artificial weathering
effect of salt spray
effect of sulphur dioxide
effect of high humidity
ease of cleaning
resistance to chemicals, marking and staining.

7.2 An assessment was made of independent test data relating to:

fire propagation
surface spread of flame
fire exposure roof rating.

8 Other investigations

8.1 Visits have been made to Approved Applicators to assess their methods of quality control during the assessment of other Syntha Pulvin products.

8.2 Details of the procedures adopted by H B Fuller Coatings Ltd for control over their Approved Applicators were examined.

8.3 An examination of the applicators' coating processes was carried out as part of earlier assessments to confirm compliance with BS 6496 : 1984(1991) and BS 6497 : 1984(1991).

Bibliography

BS 476 *Fire tests on building materials and structures*
Part 3 : 1958 *External fire exposure roof test*
Part 6 : 1989 *Method of test for fire propagation for products*

Part 7 : 1987 *Method for classification of the surface spread of flame for products*

BS 6496 : 1984(1991) *Specification for 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 alloy extrusions, sheet and preformed sections coated with powder organic coatings*

BS 6497 : 1984(1991) *Specification for powder organic coatings for application and stoving to hot-dip galvanized hot-rolled steel sections and preformed steel sheet for windows and associated external architectural purposes, and for the finish on galvanized steel sections and preformed sheet coated with powder organic coatings*

BS 8200 : 1985 *Code of practice for design of non-loadbearing external vertical enclosures of buildings*



On behalf of the British Board of Agrément

Date of Second issue: 12th February 1998

Director

*Original Detail Sheet issued 11th August 1995. This amended version includes a change of name of Certificate holder.

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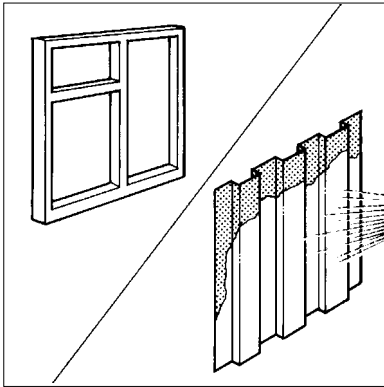
H B Fuller Coatings Ltd

**SYNTHA PULVIN PLUS
METALLIC/SYNTHATEC PLUS METALLIC**

Certificate No 94/3041

DETAIL SHEET 5

Product



• THIS DETAIL SHEET RELATES TO SYNTHA PULVIN PLUS METALLIC/SYNTHATEC PLUS METALLIC, A POLYESTER POWDER COATING SYSTEM FOR ALUMINIUM AND GALVANIZED STEEL WINDOW FRAMES, CURTAIN WALLING AND ROOFING OR CLADDING PANELS.

• The product must be applied and installed in accordance with the conditions set out in the Front Sheets of this Certificate.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, general information relating to the product, and the Conditions of Certification.

Technical Specification

1 Description

1.1 Syntha Pulvin Plus Metallic/Synthatec Plus Metallic is a decorative/protective polyester powder coating, with a metallic finish, for application to window frames, curtain walling or roofing/cladding panels.

1.2 The product is available in a standard range of colours, details of these are available from the manufacturer. Other colours can be produced to clients' requirements, after an investigation to ensure colour stability.

1.3 Syntha Pulvin Plus Metallic/Synthatec Plus Metallic has a minimum cured coating thickness of 40 µm on aluminium and 60 µm on galvanized steel. Where an aluminium component is to be installed in a particularly corrosive environment, such as coastal locations of swimming pools, consideration should be given to increasing the minimum coating thickness to 60 µm.

Design Data

2 General

Syntha Pulvin Plus Metallic/Synthatec Plus Metallic is satisfactory for application in an industrial process to aluminium and galvanized steel by Approved Applicators of H B Fuller Coatings Ltd.

3 Performance in fire

3.1 When tested to BS 476 : Part 6 : 1968, a Syntha Pulvin Plus Metallic/Synthatec Plus Metallic coating achieved an overall index of performance (I) of 1.2 and a sub-index (i_1) of 0.

3.2 When tested to BS 476 : Part 7 : 1971, a Syntha Pulvin Plus Metallic/Synthatec Plus Metallic coating had a Class 1 surface. Therefore the product has a Class 0 surface as defined in the various Building Regulations.

3.3 When tested to BS 476 : Part 3 : 1958, a Syntha Pulvin Plus Metallic/Synthatec Plus Metallic coating on 3.0 mm thick aluminium achieved an EXT.S.AA rating.

4 Location

The coating is tough and abrasion resistant, making the products suitable for use at low level in areas readily accessible to the public (eg alongside pedestrian thoroughfares and playing fields) where accidental damage is possible. Thus Synthta Pulvin Plus Metallic/Synthatec Plus Metallic coated products are suitable for use in category B (and less vulnerable) situations, as described in BS 8200 : 1985, Table 2, reproduced (in part) in Table 1.

Table 1 Location areas

Category	Description	Examples
B	Readily accessible to public and others with little incentive to exercise care. Chances of accident occurring and of misuse	Walls adjacent to pedestrian thoroughfares or playing fields when not in category A
C	Accessible primarily to those with some incentive to exercise care. Some chance of accident occurring and misuse	Walls adjacent to private open gardens Back walls of balconies
D	Only accessible, but not near a common route, to those with high incentive to exercise care. Small chance of accident occurring or of misuse	Walls adjacent to small fenced decorative garden with no through paths or floor
E	Above zone of normal impacts from people but liable to impacts from thrown or kicked objects	1.5 m to 6 m above pedestrian or floor level in public areas
F	Above zone of normal impacts from people and not liable to impacts from thrown or kicked objects	Wall surfaces at higher positions than those defined in E above

Zone of wall up to 1.5 m above pedestrian or floor level.

5 Maintenance

5.1 A remedial paint system is available for on-site repair of accidental damage to the coating, and for matching colours on fastenings, etc. Further details can be obtained from H B Fuller Coatings Ltd.

5.2 The installation should be maintained by regular washing down, in accordance with sections 10.1 and 10.2 of the Front Sheets of this Certificate and the manufacturer's instructions.

6 Durability



Synthta Pulvin Plus Metallic/Synthatec Plus Metallic coated on galvanized steel or aluminium cladding, curtain walling, roofing or window frames will perform effectively with a life expectancy exceeding 30 years. It will have an anticipated decorative life of 20 years in heavily polluted areas and 25 years in other areas.

As part of the assessment leading to the issue of a previous Agrément Certificate, the following investigations were carried out.

7 Tests

7.1 Test data was examined relating to:

scratch resistance
cross-hatch adhesion
abrasion resistance (Taber)
impact resistance
effect of artificial weathering
effect of salt spray
effect of high humidity
ease of cleaning
mortar resistance
resistance to chemicals, marking and staining.

7.2 An assessment was made of independent test data relating to:

fire propagation
surface spread of flame
fire exposure roof rating.

8 Other investigations

8.1 Visits were made to Approved Applicators to assess their methods of quality control.

8.2 Details of the procedures adopted by H B Fuller Coatings Ltd for control over their Approved Applicators were examined.

8.3 A user survey and a visit to an established site were conducted to evaluate performance in use.

8.4 An assessment of the applicators' coating processes was made to confirm compliance with BS 6496 : 1984(1991) and BS 6497 : 1984(1991).

8.5 An examination was made of the data and investigations on which the previous Certificate was based. The original conclusions remain valid.

8.6 Regular factory inspections have been carried out to ensure that quality is being maintained.

Bibliography

BS 476 *Fire tests on building materials and structures*

Part 3 : 1958 *External fire exposure roof test*

Part 6 : 1968 *Fire propagation test for building materials*

Part 7 : 1971 *Surface spread of flame tests for materials*

BS 6496 : 1984(1991) *Specification for 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 alloy extrusions, sheet and preformed sections coated with powder organic coatings*

BS 6497 : 1984(1991) *Specification for powder organic coatings for application and stoving to hot-dip galvanized hot-rolled steel sections and preformed steel sheet for windows and associated external architectural purposes, and for the finish on galvanized steel sections and preformed sheet coated with powder organic coatings*

BS 8200 : 1985 *Code of practice for design of non-loadbearing external vertical enclosures of buildings*



On behalf of the British Board of Agrément

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