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Agrément Certificate No 93/2918
*Third issue**

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

HYDROCOAT COIL-COATED ALUMINIUM ALLOY COIL AND SHEET

Plaque en alliage d'aluminium
Legierungsblech auf Aluminiumgrundlage

Product

- *THIS CERTIFICATE RELATES TO THE HYDROCOAT COIL-COATED ALUMINIUM ALLOY COIL AND SHEET PRODUCTS DESCRIBED IN THE ACCOMPANYING DETAIL SHEETS.*
- *The products may be:*

(a) profiled by roll-forming for use as external roofing, cladding or internal lining in accordance with the documents listed in section 13 of these Front Sheets,

(b) brake-pressed into the associated flashings and fittings, or

(c) used as flat sheet.

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

Regulations — Detail Sheet 1

1 The Building Regulations 2000 (as amended) (England and Wales)

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 profiled sheets for roofing and cladding with the Building Regulations. In the opinion of the BBA, Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement:	B2(1)	Internal fire spread (linings)
Comment:		The products meet this Requirement. See the tinted areas in the *Properties in relation to fire* section of the accompanying Detail Sheets.
Requirement:	B3(2)(4)	Internal fire spread (structure)
Comment:		The products are unrestricted under this Requirement. See the tinted areas in the *Properties in relation to fire* section of the accompanying Detail Sheets.
Requirement:	B4(1)(2)	External fire spread
Comment:		The products are unrestricted under this Requirement. See the tinted areas in the *Properties in relation to fire* section of the accompanying Detail Sheets.
Requirement:	C2(b)	Resistance to moisture
Comment:		The products meet this Requirement.

Requirement:	**Regulation 7**	Materials and workmanship
Comment:		The products are acceptable. See the tinted area in the *Durability* section of these Front Sheets and the accompanying Detail Sheets.

2 The Building (Scotland) Regulations 2004

In the opinion of the BBA, Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Mandatory Standards as listed below.

Regulation:	**8**	**Fitness and durability of materials and workmanship**
Regulation:	8(1)	Fitness and durability of materials and workmanship
Comment:		The products can contribute to a construction satisfying this Regulation. See the tinted areas in the *Durability* section of these Front Sheets and the accompanying Detail Sheets and the *Installation* part of the accompanying Detail Sheets.
Regulation:	**9**	**Building standards — construction**
Standard:	2.1	Compartmentation
Standard:	2.2	Separation
Standard:	2.4	Cavities
Standard:	2.5	Internal linings
Comment:		The products can satisfy these Standards, with reference to clauses 2.1.16[2], 2.2.7[2], 2.2.10[1], 2.4.2[1][2], 2.4.3[2], 2.4.7[1], 2.4.9[2] and 2.5.1[1][2] respectively. See the tinted areas in the *Performance in relation to fire* section of the accompanying Detail Sheets.
Standard:	2.6	Spread to neighbouring buildings
Comment:		Coated aluminium sheet is restricted under this Standard, whereas uncoated aluminium sheet is unrestricted, with reference to clauses 2.6.4[1][2], 2.6.5[1] and 2.6.6[2]. See the tinted areas in the *Performance in relation to fire* section of the accompanying Detail Sheets.
Standard:	2.7	Spread on external walls
Standard:	2.8	Spread from neighbouring buildings
Comment:		The products can satisfy these Standards, with reference to clauses 2.7.1[1][2] and 2.8.1[1][2] respectively. See the tinted areas in the *Performance in relation to fire* section of the accompanying Detail Sheets.
Standard:	3.10	Precipitation
Comment:		The products can contribute to satisfying this Standard, with reference to clauses 3.10.1[1][2], 3.10.5[1][2] and 3.10.7[1][2].
Regulation:	**12**	**Building standards — conversions**
Comment:		All comments given for these products under Regulation 9, also apply to this Regulation with reference to clause 0.12.1[1][2] and Schedule 6[1][2].

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

3 The Building Regulations (Northern Ireland) 2000 (as amended)

In the opinion of the BBA, Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	**B2**	Fitness of materials and workmanship
Comment:		The products are acceptable. See the tinted areas in the *Durability* section of these Front Sheets and the accompanying Detail Sheets.
Regulation:	**C4**	Resistance to ground moisture and weather
Comment:		The products can be used to satisfy this Regulation.
Regulation:	**E3**	Internal fire spread — Linings
Comment:		The products have a Class 0 surface as defined in Technical Booklet E : 1994 : Section 2.4, and are unrestricted under this Regulation. See the tinted areas in the *Performance in relation to fire* section of the accompanying Detail Sheets.
Regulation:	**E4**	Internal fire spread — Structure
Comment:		The products are unrestricted under this Regulation. See the tinted areas in the *Performance in relation to fire* section of the accompanying Detail Sheets.
Regulation:	**E5**	External fire spread
Comment:		The products are unrestricted under this Regulation. See the tinted areas in the *Performance in relation to fire* section of the accompanying Detail Sheets.

4 Construction (Design and Management) Regulations 1994 (as amended) Construction (Design and Management) Regulations (Northern Ireland) 1995 (as amended)

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* (7.2 and 7.4) of these Front Sheets.

Technical Specification

5 Description

5.1 Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet are coated on one(1) or both sides with the coating described in the appropriate Detail Sheet.

(1) The reverse side is coated to one of the specifications described in the appropriate Detail Sheet.

5.2 Each paint finish is available in a range of colours as detailed in the appropriate Detail sheet.

5.3 Coils and sheets can be supplied stucco-embossed.

5.4 Coils are available in standard sizes of:

thickness (mm)	0.4 to 1.35(1)
width (m)	1.525 maximum

(1) There are recommendations for minimum thicknesss of aluminium sheet for roofing applications given in CP 143-1 : 1958 and the Metal Cladding and Roofing Manufacturers Association (MCRMA) Technical Paper No 6.

5.5 Sheets are available up to a maximum size of 5 m by 1.2 m.

6 Manufacture

6.1 In a coil-coating process aluminium coil, to BS EN 573-3 : 2003, alloys EN AW-1050A, EN AW-3003 and EN AW-3105 (or to an agreed alternative specification), is hot AC anodically pre-treated and coated to the specification described in the appropriate Detail Sheet.

6.2 Quality control tests are carried out on incoming paint and on the finished products.

7 Delivery and site handling

7.1 The products are not normally delivered to site in coil form, but are formed into profiled sheets and flashings by specialist forming companies.

7.2 The profiled sheet is normally delivered to site on trailers and unloaded by crane. The site must have adequate access and a suitable surface for this traffic.

7.3 During transport, the edges and corners of the sheets must be protected against damage and the sheets should be restrained to prevent abrasion.

7.4 On site, sheets should be stored on a firm, dry base, on bearers at a maximum spacing of 900 mm, away from the possibility of damage, and covered to prevent the ingress of water. They should be stored as close as possible to the building where they are to be installed and handled in accordance with the Manual Handling Operations Regulations 1992.

7.5 When required for installation the sheets should be lifted from the stack rather than dragged across it.

Design Data

8 General

8.1 Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet, after roll-forming or brake-pressing, is suitable for external use as roofing or cladding, or for internal use as a lining.

8.2 It may be used as plain sheet for such purposes as small infill panels (provided these are sufficiently robust and properly secured).

9 Workability

9.1 The products may be worked by conventional techniques including brake-pressing, roll-forming, bending, drilling and punching. It is essential that the correct tools, in good condition, are used and that any swarf is removed.

9.2 Some care is necessary when handling the material on site to prevent accidental damage to the coating.

10 Compatibility

To prevent electro-chemical corrosion, direct contact with copper, or water run-off from copper installations, or direct contact with lead in coastal environments, should be avoided. Fixing devices must be of, or compatible with, aluminium. Precautions must also be taken (eg by using a strip sealant) to prevent direct contact with timber preserved with copper or fluoride compounds or treated with a fire retardant.

11 Maintenance

11.1 In some areas (eg industrial areas, and where cladding is sheltered directly beneath a soffit), it will be necessary to clean the installation periodically, both to restore its appearance and to remove potentially corrosive deposits. This can be done by hosing with water, using a neutral detergent.

11.2 Damaged panels may be replaced using normal installation techniques.

12 Durability

12.1 The products are resistant to all normal atmospheric corrosive agencies (including marine and industrial) and will withstand considerable distortion of the metal without the coating losing adhesion.

12.2 The coatings are colour-fast and have the durability described in the accompanying Detail Sheet.

Installation

13 Procedure

The installation is designed and carried out in accordance with CP 143-1 : 1958, or with the relevant parts of:

- BS 5427-1 : 1996
- BS 8200 : 1985
- National Federation of Roofing Contractors Profiled sheet metal roofing and cladding — A guide to good practice
- MCRMA[1] Technical Paper No 12 — *Fasteners for metal roof and wall cladding : Design, detailing and installation guide*
- MCRMA Technical Paper No 5 — *Metal Wall Cladding Detailing Guide*
- MCRMA Technical Paper No 6 — *Profiled Metal Roofing Design Guide.*

(1) The Metal Cladding and Roofing Manufacturers' Association.

Technical Investigations

The following is a summary of the technical investigations carried out on Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet.

14 Tests

14.1 Tests were carried out in accordance with MOAT No 34 : 1986 to determine:

- adhesion to substrate
- abrasion resistance
- impact resistance
- scratch resistance
- effect of artificial weathering
- effect of salt spray
- effect of bending
- resistance to sulfur dioxide
- resistance to chemicals, marking and staining.

14.2 An examination was made of independent test reports relating to:

- fire propagation
- surface spread of flame
- fire roof exposure rating.

15 Investigations

15.1 A factory visit was made to examine the manufacturing process and obtain details of the raw material specifications and quality control procedures.

15.2 A site visit was made to confirm the practicability of installation.

15.3 Visits were made to established sites to determine the performance of the products in service.

Additional Information

- the management systems of the Certificate holder have been assessed and registered as meeting the requirements of NS EN ISO 9001 : 2000 by Det Norske Veritas (Certificate No 96-OSL-AQ-6401)
- the Certificate holder also complies with the requirements of NS EN ISO 14001 : 2004 by Det Norske Veritas (Certificate No 97-OSL-SYMI-8016).

Bibliography

BS 5427-1 : 1996 *Code of practice for the use of profiled sheet for roof and wall claddings on buildings — Design*

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

BS EN 573-3 : 2003 *Aluminium and aluminium alloys — Chemical composition and form of wrought products — Chemical composition*

NS EN ISO 9001 : 2000 *Quality management systems — Requirements*

NS EN ISO 14001 : 2004 *Environmental management systems — Specification with guidance for use*

CP 143-1 : 1958 *Code of practice for sheet roof and wall coverings — Aluminium, corrugated and troughed*

MOAT No 34 : 1986 *Precoated metal sheet roofing and cladding*

Conditions of Certification

16 Conditions

16.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is granted only to the company, firm or person named on the front page — no other company, firm or person may hold or claim any entitlement to this Certificate
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English law.

16.2 References in this Certificate to any Act of Parliament, Statutory Instrument, Directive or Regulation of the European Union, British, European or International Standard, Code of Practice, manufacturers' instructions or similar publication, are references to such publication in the form in which it was current at the date of this Certificate.

16.3 This Certificate will remain valid for an unlimited period provided that the product/system and the manufacture and/or fabrication including all related and relevant processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

16.4 In granting this Certificate, the BBA is not responsible for:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- individual installations of the product/system, including the nature, design, methods and workmanship of or related to the installation
- the actual works in which the product/system is installed, used and maintained, including the nature, design, methods and workmanship of such works.

16.5 Any information relating to the manufacture, supply, installation, use and maintenance of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used and maintained. It does 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; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any 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 manufacture, supply, installation, use and maintenance of this product/system.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, Hydrocoat Coil-Coated Aluminium Alloy Coil and Sheet are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 93/2918 is accordingly awarded to Hydro Aluminium Rolled Products AS.

On behalf of the British Board of Agrément

Date of Third issue: 16th March 2007

Chief Executive

**Original Certificate issued on 29th June 1993. This amended version includes two new sections* Workability *and* Compatibility *and reference to revised national Building Regulations and Standards and new* Conditions of Certification.

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BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

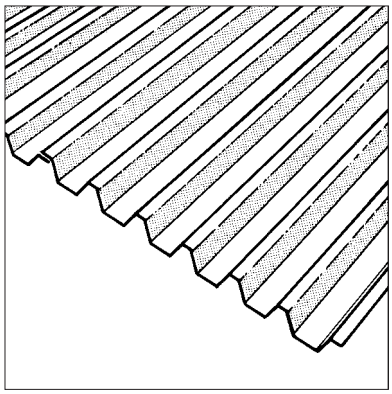
Hydro Aluminium Rolled Products AS
Holmestrand

HYDROCOAT POLYESTER 100-COATED ALUMINIUM ALLOY COIL AND SHEET

Certificate No 93/2918

DETAIL SHEET 2
*Third issue**

Product



- *THIS DETAIL SHEET RELATES TO HYDROCOAT POLYESTER 100-COATED ALUMINIUM ALLOY COIL AND SHEET, COATED ON THE FACE SIDE(1) WITH A PRIMER AND A POLYESTER PAINT TO A TOTAL COATING THICKNESS OF 25 µm.*
- *The product is available in a range of colours and gloss levels.*

(1) The reverse side is coated with a 5 µm polyester lacquer coating or the same specification as the face side.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, Installation, Technical Investigations *and the* Conditions of Certification.

Design Data

1 General

Hydrocoat Polyester 100-Coated Aluminium Alloy Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for external use as plain sheet or in profiled form in accordance with the documents listed in section 13 of the Front Sheets. The product is available in a range of colours, between 20% and 80% gloss levels, details of which may be obtained from the manufacturer.

2 Workability

Hydrocoat Polyester 100-Coated EN AW-3105 alloy H25 aluminium can withstand a 1.5T [ECCA(1) T7/1985] bend through 180° without damage. Other alloys and tempers may be less flexible.

(1) European Coil Coating Association.

3 Performance in relation to fire

3.1 A sample of the white-coloured product, when tested to BS 476-3 : 1958, has an EXT.S.AA rating.

3.2 When tested to BS 476-6 : 1989 a sample of the white-coloured product achieved an index of performance of I = 0.7 with i_1 = 0.6, and when tested to BS 476-7 : 1987 it achieved a Class 1 surface. Therefore it has a Class 0 surface as defined in The Building Regulations 2000 (as amended) (England and Wales), and The Building Regulations (Northern Ireland) 2000 (as amended), and a 'low risk' surface under the Building (Scotland) Regulations 2004.

3.3 The performances stated in sections 3.1 and 3.2 may not be achieved by other colours in the range. The performance of other colours should be confirmed by:

England and Wales

Test or assessment, in accordance with Approved Document B, Appendix A, Clause 1

Scotland

Test to conform with Regulation 9, Annex 2C(1) and 2E(2), Table.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland

Test or assessment by a UKAS accredited laboratory or an independent consultant with appropriate experience.

3.4 The reverse side's lacquer coating is also a Class 0 or 'low risk' surface.

4 Location

The product is suitable for use in areas where there is little possibility of impact or abrasion damage, ie at low levels in areas with restricted access, or at higher levels in public areas. These are as described in categories C to F of BS 8200 : 1985, Table 2, and as categories E'_2 to E_5 of MOAT No 43 : 1987, Table 3.1, which are reproduced (in part) in Table 1.

5 Durability

5.1 The product will perform effectively as a cladding or roofing with an ultimate life of at least 30 years.

5.2 The coating will chalk and there will be a colour change (but the changes in appearance on each face of the building will be uniform). Maintenance painting should be considered after 10 years in industrial conditions, or after 15 years in less aggressive environments. The Certificate holder can recommend a suitable paint and maintenance system.

Table 1 Categories — BS 8200 and MOAT No 43

Category BS 8200	Description	Examples		Category MOAT 43
C	Accessible mainly to those with some incentive to exercise care. Some chance of accident occurring and of misuse	Walls adjacent to private open gardens. Back walls of balconies	Zone of wall up to 1.5 m above pedestrian or floor level	E_3
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 gardens with no through paths or floor		E_4
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		E'_2
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		E_5

5.3 A planned maintenance cycle (see the *Maintenance* section of the Front Sheets) should be introduced if an extended design life is required.

5.4 If the building has an exposed eaves detail and is in an aggressive environment, or if there are corrosive conditions inside it, the specification of the reverse side coating should be discussed with the manufacturer.

Bibliography

BS 476-3 : 1958 *Fire tests on building materials and structures — External fire exposure roof test*
BS 476-6 : 1989 *Fire tests on building materials and structures — Method of test for fire propagation for products*
BS 476-7 : 1987 *Fire tests on building materials and structures — Method for classification of the surface spread of flame of products*

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

MOAT No 43 : 1987 *UEAtc Directives for Impact Testing Opaque Vertical Building Components*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of Third issue: 16th March 2007

Chief Executive

**Original Detail Sheet issued on 29th June 1993. This amended version includes additional fire statements and handling details.*

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TECHNICAL APPROVALS FOR CONSTRUCTION

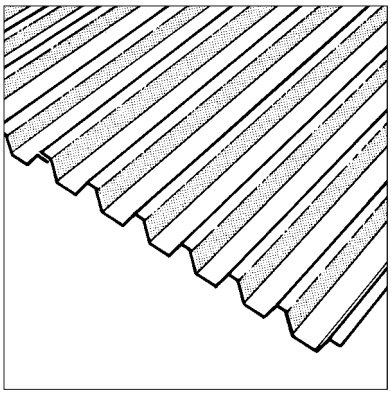
Hydro Aluminium Rolled Products AS
Holmestrand

Certificate No 93/2918

DETAIL SHEET 3
*Third issue**

HYDROCOAT PVF_2 300-COATED ALUMINIUM ALLOY COIL AND SHEET

Product



- *THIS DETAIL SHEET RELATES TO HYDROCOAT PVF_2 300-COATED ALUMINIUM ALLOY COIL AND SHEET, COATED ON THE FACE SIDE[1] WITH A PRIMER AND A CLASS 1 POLYVINYLIDENE FLUORIDE/ ACRYLIC PAINT TO A TOTAL COATING THICKNESS OF 25 µm.*
- *The product is available in a range of colours and gloss levels.*

(1) The reverse side is coated with a 5 µm polyester lacquer coating or the same specification as the face side.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, Installation, Technical Investigations *and the* Conditions of Certification.

Design Data

1 General

Hydrocoat PVF_2 300-Coated Aluminium Alloy Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for external use as plain sheet or in profile form in accordance with the documents listed in section 13 of the Front Sheets. The product is available in a range of colours, between 20% and 40% gloss, details of which may be obtained from the manufacturer.

2 Workability

Hydrocoat PVF_2 300-Coated EN AW-3105 alloy H25 aluminium is sufficiently flexible to withstand a 1T [ECCA[1] T7/1985] bend through 180° without damage. Other alloy and tempers may be less flexible.

(1) European Coil Coating Association.

3 Performance in relation to fire

3.1 A sample of the black-coloured product, when tested to BS 476-3 : 1958, has an EXT.S.AA rating.

3.2 When tested to BS 476-6 : 1981 a sample of the black-coloured product achieved an index of performance of I = 4.8 with i_1 = 2.8, and when tested to BS 476-7 : 1987 it achieved a Class 1 surface. It therefore has a Class 0 surface as defined in The Building Regulations 2000 (as amended) (England and Wales), and The Building Regulations (Northern Ireland) 2000 (as amended), and a 'low risk' surface under The Building Standards (Scotland) Regulations 2004.

3.3 The performances stated in sections 3.1 and 3.2 may not be achieved by other colours in the range. The performance of other colours should be confirmed by:

England and Wales

Test or assessment, in accordance with Approved Document B, Appendix A, Clause 1

Scotland

Test to conform with Regulation 9, Annex 2C[1] and 2E[2], Table.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland

Test or assessment by a UKAS accredited laboratory or an independent consultant with appropriate experience.

3.4 The reverse side's lacquer coating is also a Class 0 or 'low risk' surface.

4 Location

The product is suitable for use in areas where there is little possibility of impact or abrasion damage, ie at low levels in areas with restricted access, or at higher levels in public areas. These are as described in categories C to F of BS 8200 : 1985, Table 2, and as categories E'_2 to E_5 of MOAT No 43 : 1987, Table 3.1, which are reproduced (in part) in Table 1.

5 Durability

5.1 The product will perform effectively as a cladding or roofing with an ultimate life of at least 30 years.

5.2 The coating will retain a good appearance under non-corrosive conditions for up to 20 years, and for up to 15 years in industrial environments. Maintenance painting should be considered if a high aesthetic standard is required. The Certificate holder can recommend a suitable paint and maintenance system.

Table 1 Categories — BS 8200 and MOAT No 43

Category BS 8200	Description	Examples	Category MOAT 43
C	Accessible mainly to those with some incentive to exercise care. Some chance of accident occurring and of misuse	Walls adjacent to private open gardens. Back walls of balconies (Zone of wall up to 1.5 m above pedestrian or floor level)	E_3
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 gardens with no through paths or floor (Zone of wall up to 1.5 m above pedestrian or floor level)	E_4
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	E'_2
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	E_5

5.3 A planned maintenance cycle (see the *Maintenance* section of the Front Sheets) should be introduced if an extended design life is required.

5.4 If the building has an exposed eaves detail, and is in an aggressive environment, or if there are corrosive conditions inside it, the specification of the reverse side coating should be discussed with the manufacturer.

Bibliography

BS 476-3 : 1958 *Fire tests on building materials and structures — External fire exposure roof test*
BS 476-6 : 1989 *Fire tests on building materials and structures — Method of test for fire propagation for products*
BS 476-7 : 1987 *Fire tests on building materials and structures — Method for classification of the surface spread of flame of products*

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

MOAT No 43 : 1987 *UEAtc Directives for Impact Testing Opaque Vertical Building Components*

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On behalf of the British Board of Agrément

Date of Third issue: 16th March 2007

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Hydro Aluminium Rolled Products AS
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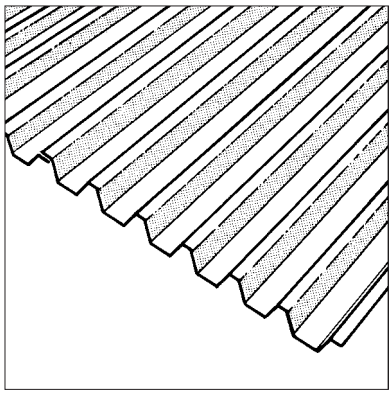
Certificate No 93/2918

DETAIL SHEET 4

*Third issue**

HYDROCOAT TEXTURED 800-COATED ALUMINIUM ALLOY COIL AND SHEET

Product



- *THIS DETAIL SHEET RELATES TO HYDROCOAT TEXTURED 800-COATED ALUMINIUM ALLOY COIL AND SHEET, COATED ON THE FACE SIDE(1) WITH A PRIMER AND A TEXTURED POLYAMIDE MODIFIED POLYESTER PAINT TO A TOTAL COATING THICKNESS OF 25 µm.*
- *The product is available in a range of colours and gloss levels.*

(1) The reverse side is coated with a 5 µm polyester lacquer coating or the same specification as the face side.

This Detail Sheet must be read in conjunction with the Front Sheets, which give the product's position regarding the Building Regulations, Installation, Technical Investigations *and the* Conditions of Certification.

Design Data

1 General

Hydrocoat Textured 800-Coated Aluminium Alloy Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for external use as plain sheet or in profile form in accordance with the documents listed in section 13 of the Front Sheets. The product is available in a range of colours, between 20% and 40% gloss levels, details of which may be obtained from the manufacturer.

2 Workability

Hydrocoat Textured 800-Coated EN AW 3105 alloy H25 aluminium can withstand a 1T [ECCA T7/1985] bend through 180° without damage. Other alloys and tempers may be less flexible.

(1) European Coil Coating Association.

3 Performance in relation to fire

3.1 A sample of the white-coloured product, when tested to BS 476-3 : 1958, has an EXT.S.AA rating.

3.2 When tested to BS 476-6 : 1989 a sample of the white-coloured product achieved an index of performance of I = 2.7 with i_1 = 2.2, and when tested to BS 476-7 : 1987 it achieved a Class 1 surface. Therefore it has a Class 0 surface as defined in The Building Regulations 2000 (as amended) (England and Wales), and The Building Regulations (Northern Ireland) 2000 (as amended), and a 'low risk' surface under The Building (Scotland) Regulations 2004.

3.3 The performances stated in sections 3.1 and 3.2 may not be achieved by other colours in the range. The performance of other colours should be confirmed by:

England and Wales

Test or assessment, in accordance with Approved Document B, Appendix A, Clause 1

Scotland

Test to conform with Regulation 9, Annex 2C(1) and 2E(2), Table.

(1) Technical Handbook (Domestic).

(2) Technical Handbook (Non-Domestic).

Northern Ireland

Test or assessment by a UKAS accredited laboratory or an independent consultant with appropriate experience.

3.4 The reverse side's lacquer coating is also a Class 0 or 'low risk' surface.

4 Location

4.1 The coating is tough and abrasion resistant, making the product suitable for use at low level in areas readily accessible to the public where accidental damage is possible (eg alongside pedestrian thoroughfares and playing fields). These situations are described as category B in BS 8200 : 1985, Table 2, or as category E_2 in MOAT No 43 : 1987. These categories (and those for less vulnerable situations) are defined in Table 1.

4.2 The impact resistance of the product is determined by the impact resistance of the aluminium on which it is based. No adhesion failure of the coating will occur although hairline cracks may occur in areas of high stress.

5 Durability

5.1 The product will perform effectively as a cladding or roofing with an ultimate life of at least 30 years.

5.2 The coating will chalk, and there will be a colour change (but the changes in appearance on each face of the building will be uniform). Maintenance painting should be considered after 15 years, or after 12 years for metallic colours. The Certificate holder can recommend a suitable paint and maintenance system.

Table 1 Categories — BS 8200 and MOAT No 43

Category BS 8200	Description	Examples		Category MOAT 43
B	Readily accessible to public and others with little incentive to exercise care. Chances of accidents 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	E_2
C	Accessible mainly to those with some incentive to exercise care. Some chance of accident occurring and of misuse	Walls adjacent to private open gardens. Back walls of balconies		E_3
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 gardens with no through paths or floor		E_4
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		E'_2
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		E_5

5.3 A planned maintenance cycle (see the *Maintenance* section of the Front Sheets) should be introduced if an extended design life is required.

5.4 If the building has an exposed eaves detail, and is in an aggressive environment, or if there are corrosive conditions inside it, the specification of the reverse side coating should be discussed with the manufacturer.

Bibliography

BS 476-3 : 1958 *Fire tests on building materials and structures — External fire exposure roof test*
BS 476-6 : 1989 *Fire tests on building materials and structures — Method of test for fire propagation for products*
BS 476-7 : 1987 *Fire tests on building materials and structures — Method for classification of the surface spread of flame of products*

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

MOAT No 43 : 1987 *UEAtc Directives for Impact Testing Opaque Vertical Building Components*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

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Chief Executive

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