



Dobel Coated Steel Ltd

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**Agrement
Certificate
No 93/2973**

Designated by Government
to issue
European Technical
Approvals

DOBEL COIL-COATED STEEL COIL AND SHEET

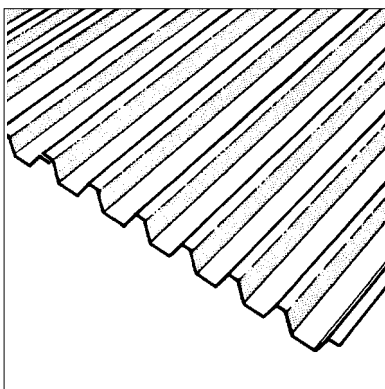
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Product

• THIS CERTIFICATE RELATES TO THE DOBEL COIL-COATED STEEL PRODUCTS DESCRIBED IN THE ACCOMPANYING DETAIL SHEETS. THE PRODUCTS HAVE A COIL-COATED FINISH ON GALVANIZED STEEL OR ALUZINK (THE SUBJECT OF BBA CERTIFICATE No 93/2971).


• 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 11 of these Front Sheets,
- (b) brake-pressed into the associated flashings and fittings, or
- (c) used as flat sheet.




Building Regulations

1 The Building Regulations 1991 (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, Dobel Coil-Coated Steel Coil and Sheet, if used in accordance with the provisions of this Certificate, will meet the relevant requirements.

Requirement: B2	Internal fire spread (linings)
Comment:	The products meet this Requirement. See section 3.1 or 3.2 of the appropriate Detail Sheet.
Requirement: B3(4)	Internal fire spread (structure)
Comment:	The roofspace and concealed cavities should be subdivided in accordance with this Requirement. See section 3.2 or 3.3 of the appropriate Detail Sheet.
Requirement: B4	External fire spread
Comment:	The relevant products meet this Requirement. See sections 3.1 and 3.2 of the appropriate Detail Sheet.
Requirement: C4	Resistance to weather and ground moisture
Comment:	The relevant products, installed in accordance with section 9 of these Front Sheets, meet this Requirement.
Requirement: Regulation 7	Materials and workmanship
Comment:	The products are acceptable. See section 7.1 of the appropriate Detail Sheets.

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

 In the opinion of the BBA, Dobel Coil-Coated Steel Coil and Sheet, 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	Selection and use of materials, fittings, components and other manufactured products
Comment:	The products comply with this Standard.
Regulation: 12	Structural fire precautions
Standard: D2.4	External wall claddings
Standard: D2.5	Separation of roofs and rooflights from boundaries
Comment:	The relevant products can satisfy these Standards. See sections 3.1 and 3.2 of the appropriate Detail Sheet.
Standards: D2.19 and D2.21	Cavity barriers
Comment:	The roofspace and concealed cavities should be subdivided in accordance with this Standard. See section 3.2 or 3.3 of the appropriate Detail Sheet.
Regulation: 13	Means of escape from fire, facilities for fire-fighting and means of warning of fire in dwellings
Standard: E2.42	Resistance to surface spread of flame
Comment:	The products are unrestricted by this Standard. See section 3.1 or 3.2 of the appropriate Detail Sheet.

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Regulation:	17	Preparation of sites and resistance to moisture
Standard:	G3.1	Resistance to precipitation
Comment:	The relevant products satisfy this Standard when installed in accordance with section 9 of these Front Sheets.	

3 The Building Regulations (Northern Ireland) 1990 (as amended 1991 and 1993)



In the opinion of the BBA, Dobel Coil-Coated Steel Coil and Sheet, if used in accordance with the provisions of this Certificate, will satisfy the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:	The products are acceptable. See section 7.1 of the appropriate Detail Sheet.	
Regulation:	C4	Resistance to ground moisture and weather
Comment:	When installed in accordance with section 9 of these Front Sheets the relevant products can be used to satisfy this Regulation.	
Regulation:	E7(4)	External walls
Comment:	The relevant products have a Class 0 surface as defined in Regulation E15(1)(e)(ii), and are unrestricted under this Regulation. See section 3.2 of the appropriate Detail Sheet.	
Regulation:	E14	Provision and construction of cavity barriers and fire stops
Comment:	The roof space and concealed cavities should be subdivided in accordance with this Regulation. See section 3.2 or 3.3 of the appropriate Detail Sheet.	
Regulation:	E15	Restriction of spread of flame over surfaces of walls and ceilings
Comment:	The products have a Class 0 surface and are unrestricted under this Regulation. See section 3.1 or 3.2 of the appropriate Detail Sheet.	
Regulation:	E17	Roofs
Comment:	The relevant products have an AA classification as defined in Regulation E1(6) and are unrestricted under this Regulation. See section 3.1 of the appropriate Detail Sheet.	

Technical Specification

4 Description

4.1 Dobel Coil-Coated Steel 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.

4.2 Each paint finish is available in a range of standard colours detailed in the appropriate Detail Sheet.

4.3 Coils are available in standard sizes of:

thickness (mm)	0.4 to 1.5
width (m)	1.50 maximum

5 Manufacture

5.1 In a coil-coating process, Aluzink hot-dip aluminium/zinc alloy coated steel to BS 6830 : 1987 or galvanized steel coil Z275 or Z350 to either EN 10142 : 1991 or EN 10147 : 1992, is degreased, chemically pre-treated and coated to the specification described in the appropriate Detail Sheet.

5.2 Quality control tests are carried out on incoming paint. Tests are conducted on each coil to determine:

paint film thickness
impact resistance
gloss
colour
bend/flexibility
pencil hardness
adhesion.

5.3 Reference tests are carried out regularly to determine the resistance to natural weathering.

6 Delivery and site handling

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

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

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

6.4 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.

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

Design Data

7 General

7.1 Dobel Coil-Coated Steel 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 as described in the appropriate Detail Sheet.

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

8 Durability

8.1 The external 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.

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

Installation

9 Procedure

9.1 The installation is designed and carried out in accordance with European Convention for the Construction of Steelwork (ECCS) Publications *European Recommendations for Steel Construction:*

No 40 *The Design of Profiled Sheeting*

No 41 *Good Practice in Steel Cladding and Roofing*

or with the relevant parts of:

BS 5427 : 1976

BS 8200 : 1985

National Federation of Roofing Contractors — *Profiled sheet metal roofing and cladding — A guide to good practice.*

9.2 Fixings should be selected in accordance with ECCS Publication No 35 *European Recommendations for Steel Construction — Mechanical Fasteners for use in Steel Sheeting and Sections* and should be corrosion-resistant (ie sherardized or galvanized steel, aluminium or stainless steel). Primary fixings should have a durable plastic or rubber washer to prevent water ingress. Electroplated carbon steel fixings must have an effective plastic capping; mild steel or copper fixings are unsuitable.

Technical Investigations

The following is a summary of the technical investigations carried out on Dobel Coil-Coated Steel Coil and Sheet.

10 Tests

10.1 Tests were carried out to determine:

abrasion resistance
impact resistance
scratch resistance
effect of artificial weathering
effect of salt spray
effect of bending
resistance to sulphur dioxide
resistance to marking and staining.

10.2 Independent test reports were examined and assessed relating to:

fire propagation
surface spread of flame
fire roof exposure rating.

11 Other investigations

11.1 Factory visits were made to examine the manufacturing process and obtain details of the raw material specifications and quality control procedures.

11.2 Visits were made to a number of established sites where the products are in service.

11.3 A site visit was made to assess the practicability of installation.

11.4 An examination was made of independent data on the products described in Detail Sheets 6, 7 and 8, for their suitability for use in food handling areas.

Bibliography

BS 5427 : 1976 *Code of practice for performance and loading criteria for profiled sheeting in building*

BS 6830 : 1987 *Specification for continuously hot-dip aluminium/zinc alloy coated cold rolled carbon steel flat products*

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

BS EN 10142 : 1991 *Specification for continuously hot-dip zinc coated low carbon steel sheet and strip for cold forming: technical delivery conditions*

BS EN 10147 : 1992 *Specification for continuously hot-dip zinc coated structural steel sheet and strip. Technical delivery conditions*

Conditions of Certification

12 Conditions

12.1 The quality of materials and the method of manufacture have been examined and found satisfactory by the BBA and must be maintained to this standard during the period of validity of this Certificate. This Certificate will remain valid for an unlimited period provided that:

- (a) the specification of the products is unchanged, and
- (b) the manufacturer continues to have the products checked by the BBA.

12.2 Where reference is made in this Certificate to any Act of Parliament, Regulation made thereunder, Statutory Instrument, Code of Practice, British Standard, manufacturer's instruction or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certificate.

12.3 In granting this Certificate, the BBA makes no representation as to the presence or absence of patent rights subsisting in the products and/or as to the legal right of Dobel Coated Steel Ltd to market, install or maintain the products.

12.4 It should be noted that any recommendations relating to the safe use of these products which are contained or referred to in this Certificate are the minimum standards required to be met when the products are used. They do not purport in any way to re-state the requirements of the Health and Safety at Work etc Act 1974, or of any other statutory or Common Law duties of care, or of any duty of care which may in the future exist; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any other present or future statutory or Common Law duties of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage incurred in respect of personal injury arising as a direct or indirect result of the use of these products.



In the opinion of the British Board of Agrément, Dobel Coil-Coated Steel Coil and Sheet are fit for their intended use if used as set out in this Certificate. Certificate No 93/2973 is accordingly awarded to Dobel Coated Steel Ltd.

On behalf of the British Board of Agrément

Date of issue: 11th March 1994

A handwritten signature in black ink, appearing to read 'P. C. Newson', is written over a light grey background.

Director

Electronic Copy

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For additional information about the Certificate, tel: 01923 665300.
For information about Agrément Certificate validity and scope, tel: Hotline 01923 665400, or check the BBA website.



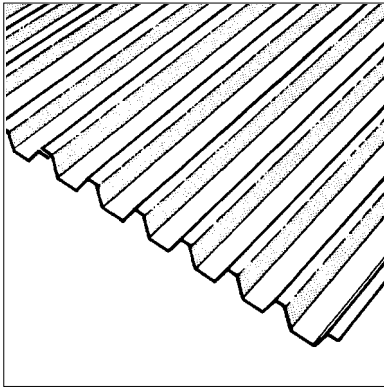
Dobel Coated Steel Ltd

Certificate No 93/2973

DOBEL 200XT PLASTISOL COATED
STEEL COIL AND SHEET

DETAIL SHEET 2

Product



• THIS DETAIL SHEET RELATES TO DOBEL 200XT PLASTISOL COATED GALVANIZED STEEL AND ALUZINK COIL AND SHEET, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A PLASTISOL PAINT TO A TOTAL COATING THICKNESS OF 200 μm .

• The product is available in a range of colours and gloss levels.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data

1 General

1.1 Dobel 200XT Plastisol Coated Steel Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for internal or external use, as plain sheet or in profiled form, in accordance with the documents listed in section 9 of the Front Sheets. The product is available in a range of standard colours (details may be obtained from the manufacturer) and in gloss levels of between 25% and 40%.

2 Workability

2.1 The product 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 to prevent any damage to the coating, and that any swarf is removed.

2.2 The coating can withstand a OT bend through 180° without damage.

3 Properties in relation to fire



3.1 The coated steel coil and sheet, when tested to BS 476 : Part 3 : 1958, has an EXT.S.AA rating.

3.2 When tested to BS 476 : Part 6 : 1989 the product has an index of performance (I) of 2.6 with sub-index (i₁) of 0.8, and when tested to BS 476 : Part 7 : 1987 has a Class 1 surface. It

therefore has a Class 0 surface as defined in the various national Building Regulations.

3.3 The reverse side specification is also a Class 0 surface.

4 Resistance to staining and marking

The coating can be permanently stained by organic dyes or inks and damaged when trying to remove dried paint splashes.

5 Location

Dobel 200XT Plastisol Coated Steel Coil and Sheet 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 E₅ of MOAT No 43 : 1987, Table 3.1 which are reproduced (in part) in Table 1.

6 Maintenance

6.1 A planned maintenance cycle should be introduced if an extended design life is desired.

6.2 In industrial and marine areas it may be necessary to clean the installation periodically to restore its appearance and remove corrosive deposits by hosing with water using a neutral detergent. It may be necessary to clean soffits and the area sheltered by overhanging eaves in any environment.

6.3 Damaged panels may be replaced using normal installation techniques.

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Table 1 Categories — BS 8200 and MOAT No 43

Category BS 8200	Description	Examples	Category MOAT 43
C	Access 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	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

7 Durability



7.1 The Dobel 200XT plastisol coating and metal treatment will protect the steel substrate against corrosion for a period in excess of 25 years in normal industrial, urban and rural environments.

7.2 The performance of the coating will depend upon the colour chosen, its environment, location, aspect face and use (ie roofing or cladding). It will retain a good appearance for at least 15 years in non-corrosive environments, or at least 10 years in marine or severe industrial environments. Colour changes, in general, will be slight.

7.3 Maintenance painting should be considered at these intervals, or earlier if a high aesthetic standard is required. Dobel Coated Steel Ltd can recommend a suitable overcoating system.

7.4 If the building has an exposed eaves detail, and is in an aggressive environment, or if there are corrosive conditions inside it, the reverse side should have the same specification as the face side, or should be overpainted.

7.5 Edge corrosion of roofing sheets can take place, but this can be minimised if the edges are painted. Dobel Coated Steel Ltd can recommend a suitable paint system. This is particularly necessary for low pitched roofs, where end laps should also be sealed.

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 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*



On behalf of the British Board of Agrément

Date of issue: 11th March 1994

Director

Recreated in QX 19.8.02 (sm)

British Board of Agrément

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For information about Agrément Certificate validity and scope, tel: Hotline 01923 665400, or check the BBA website.



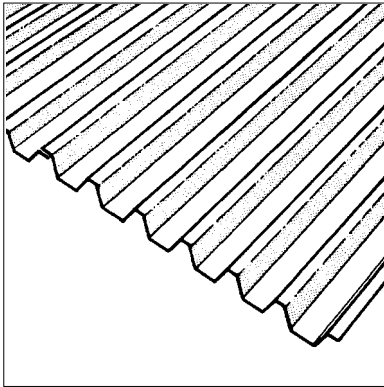
Dobel Coated Steel Ltd

Certificate No 93/2973

DOBEL PVF₂ COATED STEEL COIL AND SHEET

DETAIL SHEET 3

Product



• THIS DETAIL SHEET RELATES TO DOBEL PVF₂ COATED GALVANIZED STEEL AND ALUZINK COIL AND SHEET, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A POLYVINYLIDENE FLUORIDE/ACRYLIC PAINT TO A TOTAL COATING THICKNESS OF 27 μm .

• The product is available in a range of colours and gloss levels.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data

1 General

1.1 Dobel PVF₂ Coated Steel Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for internal or external use, as plain sheet or in profiled form, in accordance with the documents listed in section 9 of the Front Sheets. The product is available in a range of standard colours (details may be obtained from the manufacturer) and in gloss levels of between 25% and 35%.

2 Workability

2.1 The product 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 to prevent any damage to the coating.

2.2 The coating can withstand a 4T bend through 180° without damage.

3 Properties in relation to fire



3.1 The coated steel coil and sheet, when tested to BS 476 : Part 3 : 1958, has an EXT.S.AA rating.

3.2 When tested to BS 476 : Part 6 : 1989 the product has an index of performance (I) of 4.7 with sub-index (i₁) of 2.5, and when tested in BS 476 : Part 7 : 1987 has a Class 1 surface. It therefore has a Class 0 surface as defined in the various national Building Regulations.

3.3 The reverse side specification is also a Class 0 surface.

4 Resistance to staining and marking

The coating can be permanently stained by organic inks and damaged when trying to remove dried paint splashes.

5 Location

Dobel PVF₂ Coated Steel Coil and Sheet 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 E₅ of MOAT No 43 : 1987, Table 3.1 which are reproduced (in part) in Table 1.

6 Maintenance

6.1 A planned maintenance cycle should be introduced if an extended design life is desired.

6.2 In industrial and marine areas it may be necessary to clean the installation periodically to restore its appearance and remove corrosive deposits by hosing with water using a neutral detergent. It may be necessary to clean soffits and the area sheltered by overhanging eaves in any environment.

6.3 Damaged panels may be replaced using normal installation techniques.

Table 1 Categories — BS 8200 and MOAT No 43

Category BS 8200	Description	Examples	Category MOAT 43
C	Access 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	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

7 Durability



7.1 The PVF₂ coating and metal treatment will protect the steel substrate against corrosion for a period in excess of 20 years in normal industrial, urban and rural environments.

7.2 The performance of the coating will depend upon the colour chosen, its environment, location, aspect face and use (ie roofing or cladding). It will retain a good appearance for at least 15 years in non-corrosive environments, or at least 10 years in marine or severe industrial environments. Colour changes, in general, will be slight.

7.3 Maintenance painting should be considered at these intervals, or earlier if a high aesthetic standard is required. Dobel Coated Steel Ltd can recommend a suitable overcoating system.

7.4 If the building has an exposed eaves detail, and is in an aggressive environment, or if there are corrosive conditions inside it, the reverse side should have the same specification as the face side, or should be overpainted.

7.5 Edge corrosion of roofing sheets can take place, but this can be minimised if the edges are painted. Dobel Coated Steel Ltd can recommend a suitable paint system. This is particularly necessary for low pitched roofs, where end laps should also be sealed.

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 for 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*



On behalf of the British Board of Agrément

P. C. NEWTON

Date of issue: 11th March 1994

Director

Recreated in QX 1.10.02 (sm)

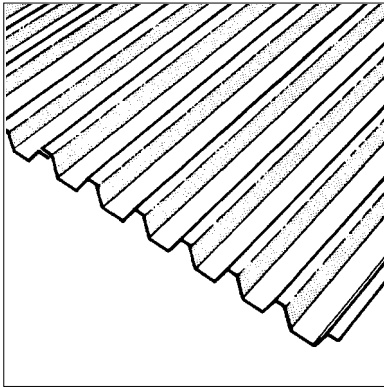


Dobel Coated Steel Ltd

Certificate No 93/2973

**DOBEL EXTERNAL POLYESTER BASE 30
COATED STEEL COIL AND SHEET**
DETAIL SHEET 4

Product



• THIS DETAIL SHEET RELATES TO DOBEL EXTERNAL POLYESTER BASE 30 COATED GALVANIZED STEEL AND ALUZINK COIL AND SHEET, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A POLYESTER PAINT TO A TOTAL COATING THICKNESS OF 27 μm .

• The product is available in a range of colours and gloss levels.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data

1 General

Dobel External Polyester Base 30 Coated Steel Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for internal or external use, as plain sheet or in profiled form, in accordance with the documents listed in section 9 of the Front Sheets. The product is available in a range of standard colours (details may be obtained from the manufacturer) and in gloss levels of between 25% and 35%.

2 Workability

2.1 The product 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 to prevent any damage to the coating.

2.2 The coating can withstand a 4T bend through 180° without damage.

3 Properties in relation to fire



3.1 The coated steel coil and sheet, when tested to BS 476 : Part 3 : 1958, has an EXT.S.AA rating.

3.2 When tested to BS 476 : Part 6 : 1989 the product has an index of performance (I) of 4.4 with sub-index (i_1) of 2.4, and when tested to BS 476 : Part 7 : 1987 has a Class 1 surface. It therefore has a Class 0 surface as defined in the various national Building Regulations.

3.3 The reverse side specification is also a Class 0 surface.

4 Resistance to staining and marking

The coating can be permanently stained by organic dyes or inks and damaged when trying to remove dried paint splashes.

5 Location

The Dobel External Polyester Base 30 Coated Steel Coil and Sheet 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 E₂ to E₅ of MOAT No 43 : 1987, Table 3.1 which are reproduced (in part) in Table 1.

6 Maintenance

6.1 A planned maintenance cycle should be introduced if an extended design life is desired.

6.2 In industrial and marine areas it may be necessary to clean the installation periodically to restore its appearance and remove corrosive deposits by hosing with water using a neutral detergent. It may be necessary to clean soffits and the area sheltered by overhanging eaves in any environment.

6.3 Damaged panels may be replaced using normal installation techniques.

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Table 1 Categories — BS 8200 and MOAT No 43

Category BS 8200	Description	Examples	Category MOAT 43
C	Access 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	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

7 Durability

7.1 The polyester coating and metal treatment will protect the steel substrate against corrosion for a period in excess of 20 years in normal industrial, urban and rural environments.

7.2 The performance of the coating will depend upon the colour chosen, its environment, location, aspect face and use (ie roofing or cladding). It will retain a good appearance for at least 15 years in non-corrosive environments, or at least 10 years in marine or severe industrial environments. Colour changes, in general, will be slight.

7.3 Maintenance painting should be considered at these intervals, or earlier if a high aesthetic standard is required. Dobel Coated Steel Ltd can recommend a suitable overcoating system.

7.4 If the building has an exposed eaves detail, and is in an aggressive environment, or if there are corrosive conditions inside it, the reverse side should have the same specification as the face side, or should be overpainted.

7.5 Edge corrosion of roofing sheets can take place but this can be minimised if the edges are painted. Dobel Coated Steel Ltd can recommend a suitable paint system. This is particularly necessary for low pitched roofs, where end laps should also be sealed.

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 for 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*



On behalf of the British Board of Agrément

Date of issue: 11th March 1994

A handwritten signature in black ink, appearing to read 'P. Q. Newman'.

Director

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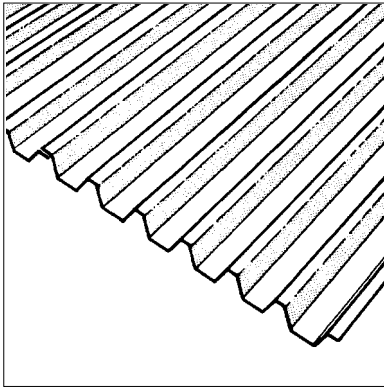


Dobel Coated Steel Ltd

Certificate No 93/2973

DETAIL SHEET 5**DOBEL LINING ENAMEL**

Product



• THIS DETAIL SHEET RELATES TO DOBEL LINING ENAMEL, COATED ALUZINK COIL AND SHEET, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A POLYESTER PAINT TO A TOTAL COATING THICKNESS OF 27 μm .

• The product is available in white, in a range of gloss levels.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data

1 General

Dobel Lining Enamel may be profiled by roll-forming or brake-pressing, and is suitable for use as internal lining, as plain sheet or in profiled form, in accordance with the documents listed in section 9 of the Front Sheets. The product is available in white, in gloss levels of between 25% and 35%.

2 Workability

2.1 The product 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 to prevent any damage to the coating.

2.2 The coating can withstand a 4T bend through 180° without damage.

3 Properties in relation to fire

3.1 When tested to BS 476 : Part 6 : 1989 the product has an index of performance (I) of 4.4 with sub-index (i_1) of 2.4, and when tested to BS 476 : Part 7 : 1987 has a Class 1 surface. It therefore has a Class 0 surface as defined in the various national Building Regulations.

3.2 The reverse side specification is also a Class 0 surface.

4 Resistance to staining and marking

The coating may be permanently stained by organic dyes or inks, and marked by certain organic solvents. Dobel Coated Steel Ltd can advise on the product's suitability for a particular application.

5 Location

Dobel Enamel is suitable for use in internal areas, such as clean rooms and food preparation areas, where there is little possibility of damage in normal use.

6 Maintenance

6.1 The product should be cleaned periodically with warm water containing a mild detergent.

6.2 The coating has limited resistance to abrasion and may suffer damage in locations where repeated abrasion is likely. This damage can normally be repaired by overpainting. Dobel Coated Steel Ltd can advise on suitable overcoating systems.

6.3 Severely damaged panels may be replaced using normal installation techniques.

7 Durability

7.1 The Dobel Lining Enamel coating and metal treatment will protect the steel substrate for a period in excess of 25 years in normal internal environments.

Electronic Copy

7.2 The coating retains a good appearance under non-corrosive, non-abrasive conditions for at least 15 years. Maintenance painting should then be considered, or earlier if a high aesthetic standard is required (see section 6 of this Certificate).

7.3 This performance may not be achieved in areas of prolonged high humidity, in chemically corrosive environments, or where a high level of physical damage is likely.

Bibliography

BS 476 *Fire tests on building materials and structures*

Part 6 : 1989 *Method of test for fire propagation for products*

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



On behalf of the British Board of Agrément

Date of issue: 11th March 1994

Director

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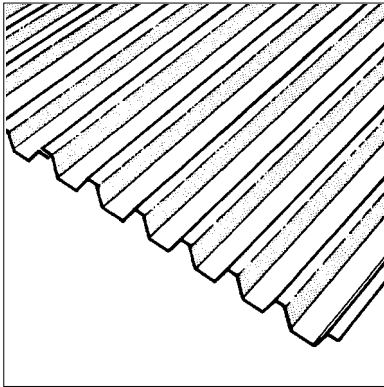
Dobel Coated Steel Ltd

Certificate No 93/2973

DETAIL SHEET 6

DOBEL PVC FOODSAFE FILM LAMINATE

Product



• THIS DETAIL SHEET RELATES TO DOBEL PVC FOODSAFE FILM LAMINATE, GALVANIZED STEEL COIL AND SHEET, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A PVC FILM TO A TOTAL COATING THICKNESS OF 150 μm .

• The product is available in white, in a range of gloss levels.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data

1 General

Dobel PVC Foodsafe Film Laminate may be profiled by roll-forming or brake-pressing, and is suitable for use as internal lining as plain sheet or in profiled form in clean rooms and food preparation areas, coldstores, etc, when installed in accordance with the documents listed in section 9 of the Front Sheets. The product is available in white, in gloss levels of between 5% and 10%.

2 Workability

2.1 The product 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 to prevent any damage to the coating, and that any swarf is removed.

2.2 The coating can withstand an OT bend through 180° without damage.

3 Properties in relation to fire

3.1 When tested to BS 476 : Part 6 : 1989 the product has an index of performance (I) of 1.9 with sub-index (i_1) of 0.6, and when tested to BS 476 : Part 7 : 1987 has a Class 1 surface. It therefore has a Class 0

surface as defined in the various national Building Regulations.

3.2 The reverse side specification is also a Class 0 surface.

4 Resistance to staining and marking

The coating can be permanently stained by organic inks and damaged by certain organic solvents. Dobel Coated Steel Ltd can advise on the products suitability for a particular application.

5 Location

Dobel PVC Foodsafe Film Laminate is suitable for use in internal areas, such as clean rooms and food preparation areas and coldstores, where there is little possibility of damage in normal use.

6 Maintenance


6.1 The product should be cleaned periodically with warm water containing a mild detergent.

6.2 The product is resistant to abrasion and impact. Any damage caused by rough handling can normally be repaired by overpainting. Dobel Coated Steel Ltd can advise on suitable overcoating systems.

6.3 Consideration must be given to the effect of overpainting on the product's suitability for use in a particular location (such as in food handling areas).

6.4 Severely damaged panels may be replaced using normal installation techniques.

7 Durability

 7.1 The Dobel PVC Foodsafe Film Laminate coating and metal treatment will protect the steel substrate for a period in excess of 25 years in normal internal environments.

7.2 The coating retains a good appearance under non-corrosive, non-abrasive conditions for at least 15 years. Maintenance painting should then be considered, or earlier if a high aesthetic standard is required (see section 6 of this Certificate).

7.3 This performance may not be achieved in areas of prolonged high humidity or in chemically corrosive environments.

Bibliography

BS 476 *Fire tests on building materials and structures*

Part 6 : 1989 *Method of test for fire propagation for products*

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



On behalf of the British Board of Agrément

Date of issue: 11th March 1994

Director

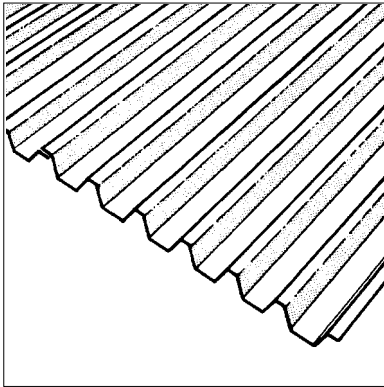
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Dobel Coated Steel Ltd

Certificate No 93/2973

DETAIL SHEET 9

DOBEL SINGLE COAT LINING ENAMEL**Product**

• THIS DETAIL SHEET RELATES TO DOBEL SINGLE COAT LINING ENAMEL, GALVANIZED (Z100 TO BS EN 10142 : 2000 OR BS EN 10147 : 2000) OR ALUZINK (AZ100 TO BS EN 10215 : 1995) COATED STEEL COIL AND SHEET, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A POLYESTER PAINT TO A TOTAL COATING THICKNESS OF 15 TO 20 μm .

• The product is available in white, at a gloss level of 20%.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data**1 General**


Dobel Single Coat Lining Enamel may be profiled by roll-forming or brake-pressing, and is suitable for use as internal lining, as plain sheet or in profiled form, in accordance with the documents listed in section 9 of the Front Sheets. The product is available in white at a gloss level of 20%.

2 Workability

2.1 The product 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 to prevent any damage to the coating.

2.2 The coating can withstand a 4T bend through 180° without damage.

3 Properties in relation to fire

 3.1 When tested to BS 476-6 : 1989 the product has an index of performance (I) of 4.4 with sub-index (i_1) of 2.4, and when tested to BS 476-7 : 1987 has a Class 1 surface. It therefore has a Class 0 surface as defined in the various national Building Regulations.

3.2 The reverse side specification is also a Class 0 surface.

4 Resistance to staining and marking

The coating may be permanently stained by organic dyes or inks, and marked by certain organic solvents. Dobel Coated Steel Ltd can advise on the product's suitability for a particular application.

5 Location

Dobel Single Coat Enamel is suitable for use in internal areas, such as clean rooms and food preparation areas, where there is little possibility of damage in normal use.


6 Maintenance

6.1 The product should be cleaned periodically with warm water containing a mild detergent.

6.2 The coating has limited resistance to abrasion and may suffer damage in locations where repeated abrasion is likely. This damage can normally be repaired by overpainting. Dobel Coated Steel Ltd can advise on suitable overcoating systems.

6.3 Severely damaged panels may be replaced using normal installation techniques.

7 Durability

 7.1 The Dobel Lining Enamel coating and metal treatment will protect the steel substrate for a period in excess of 25 years in normal internal environments.

Electronic Copy

7.2 The coating retains a good appearance under non-corrosive, non-abrasive conditions for at least 15 years. Maintenance painting should then be considered, or earlier if a high aesthetic standard is required (see section 6 of this Certificate).

7.3 This performance may not be achieved in areas of prolonged high humidity, in chemically-corrosive environments, or where a high level of physical damage is likely.

Bibliography

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 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 10215 : 1995 *Continuously hot-dip aluminium-zinc (AZ) coated steel strip and sheet — Technical delivery conditions*



On behalf of the British Board of Agrément

Date of issue: 19th November 2002

A handwritten signature in black ink, appearing to read 'P. C. Newson'.

Chief Executive



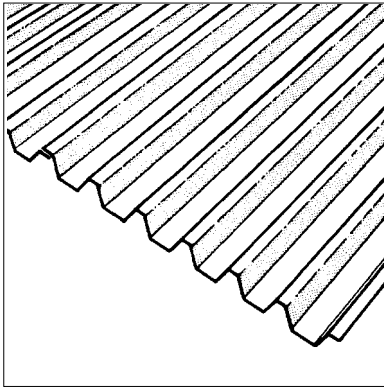
SSAB Dobel Coated Steel Ltd

DOBEL NOVA COATED STEEL COIL
AND SHEET

Certificate No 93/2973

DETAIL SHEET 10

Product



• THIS DETAIL SHEET RELATES TO DOBEL NOVA COATED STEEL COIL AND SHEET, CONSISTING OF GALVANIZED STEEL, COATED ON THE FACE SIDE⁽¹⁾ WITH A PRIMER AND A POLYESTER PAINT, INCORPORATING POLYMER GRAINS, TO A TOTAL COATING THICKNESS OF 50 μm .

• The product is available in a range of colours at a gloss level of 35%.

(1) The reverse side is coated with a 10 μm epoxy coating.

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

Design Data

1 General

Dobel Nova Coated Steel Coil and Sheet may be profiled by roll-forming or brake-pressing, and is suitable for internal or external use, as plain sheet or in profiled form, in accordance with the documents listed in section 9 of the Front Sheets. The product is available in a range of standard colours (details may be obtained from the manufacturer) and at a gloss level of 35%.

2 Workability

2.1 The product 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 to prevent any damage to the coating.

2.2 The coating can withstand a 1T bend (dark colours) or a 2T bend (light colours) through 180° without damage at temperatures above 15°C.

3 Properties in relation to fire



3.1 The coated steel coil and sheet, when tested to BS 476-3 : 1958, has an EXT.SAA rating.

3.2 When tested to BS 476-6 : 1989 the product has an index of performance (I) of 2.6 with sub-index (i_1) of 2.0, and when tested to BS 476-7 : 1997 has a Class 1 surface. It therefore has a Class 0 or 'low risk' surface as defined in the various national Building Regulations.

3.3 The reverse side specification is also a Class 0 or 'low risk' surface.

4 Resistance to staining and marking

The coating can be permanently stained by organic dyes or inks and damaged when trying to remove dried paint splashes.

5 Location

Dobel Nova Coated Steel Coil and Sheet 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 E₂ to E₅ of MOAT No 43 : 1987, Table 3.1 which are reproduced (in part) in Table 1.

6 Maintenance

6.1 A planned maintenance cycle should be introduced if an extended design life is desired.

6.2 In industrial and marine areas it may be necessary to clean the installation periodically to restore its appearance and remove corrosive deposits by hosing with water using a neutral detergent. It may be necessary to clean soffits and the area sheltered by overhanging eaves in any environment.

6.3 Damaged panels may be replaced using normal installation techniques.

Table 1 Categories — BS 8200 and MOAT No 43 : 1987

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	E ₃ Zone of wall up to 1.5 m above pedestrian or floor level
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	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

7 Durability



7.1 The polyester coating and metal treatment will protect the steel substrate against corrosion for a period in excess of 20 years in normal industrial, urban and rural environments.

7.2 The performance of the coating will depend upon the colour chosen, its environment, location, aspect face and use (ie roofing or cladding). It will retain a good appearance for at least 15 years in non-corrosive environments, or at least 10 years in marine or severe industrial environments. Colour changes, in general, will be slight.

7.3 Maintenance painting should be considered at these intervals, or earlier if a high aesthetic standard is required. The Certificate holder can recommend a suitable overcoating system.

7.4 If the building has an exposed eaves detail, and is in an aggressive environment, or if there are corrosive conditions inside it, the reverse side should have the same specification as the face side, or should be overpainted.

7.5 Edge corrosion of roofing sheets can take place but this can be minimised if the edges are painted. The Certificate holder can recommend a suitable paint system. This is particularly necessary for low-pitched roofs, where end laps should also be sealed.

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 : 1997 *Fire tests on building materials and structures — Method of test to determine the 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*



On behalf of the British Board of Agrément

Chief Executive

Date of issue: 20th November 2003