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Agrément Certificate
91/2717
Product Sheet 2

TATA STEEL COLORCOAT PRE-FINISHED STEEL COIL AND SHEET

COLORCOAT PRISMA

This Agrément Certificate Product Sheet(1) relates to Colorcoat Prisma(2), pre-finished steel coils and sheets, for use in profiled form as external roofing and cladding or internal lining.

(1) Hereinafter referred to as 'Certificate'.
(2) Colorcoat Prisma is a registered trademark of Tata Steel UK Limited.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Weathertightness — the products have adequate resistance to the passage of moisture (see section 6).

Resistance to wind uplift — the profiled products can adequately resist the effects of wind suction (see section 7).

Properties in relation to fire — Colorcoat Prisma may achieve an A1 or A2-s1, d0 reaction to fire classification to BS EN 13501-1 : 2018, respectively, however, restrictions may apply to completed roof or wall assemblies, depending on the other materials/components used and the overall construction (see section 8).

Location — the products are suitable for use in external locations where there is little possibility of impact or abrasion damage (see section 9).

Workability — the products can be worked by conventional techniques and are capable of withstanding a 0.5T bend without damage (see section 10).

Durability — under normal service conditions, the products will perform effectively with a life expectancy in excess of 40 years. Their anticipated decorative life will vary depending on the area of use (see section 12).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

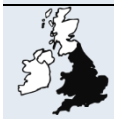
Date of Sixth issue: 28 November 2022

Originally certificated on 23 December 2008

Hardy Giesler
Chief Executive Officer

Regulations

In the opinion of the BBA, Colorcoat Prisma, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**A1**	**Loading**
Comment:		The products can contribute to satisfying this Requirement. See section 7 of this Certificate.
Requirement:	**B2(1)**	**Internal fire spread (linings)**
Comment:		Constructions incorporating the products may be restricted by this Requirement. See sections 8.1 and 8.8 of this Certificate.
Requirement:	**B3(2)**	**Internal fire spread (structure)**
Comment:		Constructions incorporating the products may be restricted by this Requirement. See sections 8.3 to 8.5 of this Certificate.
Requirement:	**B3(4)**	**Internal fire spread (structure)**
Comment:		The products can contribute to satisfying this Requirement. See section 8.1 of this Certificate.
Requirement:	**B4(1)**	**External fire spread**
Comment:		Constructions incorporating the products may be restricted by this Requirement. See sections 8.1 and 8.7 of this Certificate.
Requirement:	**B4(2)**	**External fire spread**
Comment:		Constructions incorporating the products may be restricted by this Requirement. See sections 8.3 to 8.5 of this Certificate.
Requirement:	**C2(b)**	**Resistance to moisture**
Comment:		The products can contribute to satisfying this Requirement. See section 6 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The products are acceptable. See section 12 and the *Installation* part of this Certificate.
Regulation:	**7(2)**	**Materials and workmanship**
Comment:		The products may be restricted by this Regulation. See sections 8.1 and 8.7 of this Certificate.

The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)(2)**	**Fitness and durability of materials and workmanship**
Comment:		The use of the products can contribute to a construction satisfying this Regulation. See sections 11.1, 11.2 and 12 and the *Installation* part of this Certificate.
Regulation:	**8(3)**	**Fitness and durability of materials and workmanship**
Comment:		The products may be restricted by this Regulation. See sections 8.1 and 8.7 of this Certificate.

Regulation:	**9**	**Building standards applicable to construction**
Standard:	1.1(a)(b)	Structure
Comment:		The products can contribute to a construction satisfying this Standard. See section 7 of this Certificate.
Standard:	2.1	Compartmentation
Standard:	2.2	Separation
Comment:		Constructions incorporating the products may be restricted by these Standards, with reference to clauses 2.1.12(2), 2.1.15(2), 2.2.4(2), 2.2.5(2), 2.2.7(2), 2.2.6(1), 2.2.7(1)(2), 2.2.8(1) and 2.2.10(1).). See sections 8.1 and 8.8 of this Certificate.
Standard:	2.3	Structural protection
Comment:		Constructions incorporating the products may be restricted by this Standard, with reference to clause 2.3.2(1)(2). See section 8.1 of this Certificate.
Standard:	2.4	Cavities
Comment:		The products may be restricted by this Standard in some cases, with reference to clause 2.4.2(1)(2). See sections 8.1 and 8.8 of this Certificate.
Standard:	2.5	Internal linings
Comment:		Constructions incorporating the products may be restricted by this Standard, with reference to clause 2.5.1(1)(2). See sections 8.1 and 8.8 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Comment:		Constructions incorporating the products may be restricted by this Standard, with reference to clauses 2.6.4(1)(2), 2.6.5(1) and 2.6.6(2). See sections 8.1 and 8.7 of this Certificate.
Standard:	2.7	Spread on external walls
Comment:		Constructions incorporating the products may be restricted by this Standard, with reference to clause 2.7.1(1)(2). See sections 8.1 and 8.7 of this Certificate.
Standard:	2.8	Spread from neighbouring buildings
Comment:		Constructions incorporating the products may be restricted by this Standard, with reference to clause 2.8.1(1)(2). See sections 8.3 and 8.4 of this Certificate.
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 3.10.8(1)(2). See section 6 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The products can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		All comments given for the products by Regulation 9, Standards 1 to 6 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).

The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	**23(1)(a)(i)(iii)**	**Fitness of materials and workmanship**
Comment:		The products are acceptable. See section 12 and the *Installation* part of this Certificate.
Regulation:	**23(2)**	Constructions incorporating the products can contribute to satisfying this Regulation. See sections 8.1 and 8.7 of this Certificate.
Comment:		
Regulation:	**28(b)**	**Resistance to moisture and weather**
Comment:		The products can contribute to satisfying this Regulation. See section 6 of this Certificate.
Regulation:	**30**	**Stability**
Comment:		The products can contribute to satisfying this Regulation. See section 7 of this Certificate.
Regulation:	**34(a)(b)**	**Internal fire spread — Linings**
Comment:		Constructions incorporating the products may be restricted by this Regulation. See sections 8.1 and 8.8 of this Certificate.
Regulation:	**35(2)**	**Internal fire spread — Structure**
Comment:		Constructions incorporating the products may be restricted by this Regulation. See sections 8.3 and 8.4 of this Certificate.
Regulation:	**35(4)**	**Internal fire spread — Structure**
Comment:		The products can contribute to satisfying this Regulation. See section 8.1 of this Certificate.
Regulation:	**36(a)**	**External fire spread**
Comment:		Constructions incorporating the products may be restricted by this Regulation. See sections 8.1 and 8.8 of this Certificate.
Regulation:	**36(b)**	**External fire spread**
Comment:		Constructions incorporating the products may be restricted by this Regulation. See sections 8.3 to 8.5 of this Certificate.

Construction (Design and Management) Regulations 2015
Construction (Northern Ireland) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* (3.2 and 3.4) of this Certificate.

Technical Specification

1 Description

1.1 Colorcoat[(1)] Prisma[(1)] consists of Galvalloy[(1)], 95:5% zinc/aluminium alloy coated steel, with a coating weight of 255 $g \cdot m^{-2}$, manufactured to comply with BS EN 10346 : 2015. The pre-treatment and primer are free of chromates. The products available and their specifications are shown in Table 1 of this Certificate.

Table 1 Coating specifications

Product	Finish type (see Table 2)	Front surface specification	Coil	Reverse surface specification
Colorcoat Prisma	Solid, Metallic or Matt	25 µm corrosion-resistant primer 25 µm coloured layer incorporating polyamide beads 15 µm protective clear top layer	0.4 to 1.6 mm Galvalloy in widths up to 1.5 m	10 µm polyester, or the same as the front face
	Elements	10 µm corrosion-resistant primer 20 µm coloured/ base layer 10 µm protective clear/ coloured top layer		
Colorcoat Prisma Textured	Solid and Metallic	25 µm corrosion-resistant primer 25 µm coloured layer incorporating polyamide beads 20 µm protective clear top layer		

1.2 The products are available in a range of standard colours (see Table 2). Additional colours can be produced using the Certificate holder's Repertoire(1) colour consultancy service.

(1) Colorcoat, Colorcoat Prisma, Galvalloy and Repertoire are registered trademarks of Tata Steel UK Limited.

Table 2 Colour range

Colour	Nearest RAL No	Colour Type	Colour	Nearest RAL No	Colour Type	Colour	Nearest RAL No	Colour Type
Aquarius	—(1)	Metallic	Alaska Grey	7000	Solid	Seren White	—(1)	Elements
Ariana	—(1)	Metallic	Anthracite	7016	Solid	Seren Silver	—(1)	Elements
Atlantis	—(1)	Metallic	Black	9005	Solid	Seren Gold	—(1)	Elements
Ephyra	—(1)	Metallic	Cream	1015	Solid	Seren Copper	—(1)	Elements
Helios	—(1)	Metallic	Hamlet	9002	Solid	Seren Black	—(1)	Elements
Kronos	—(1)	Metallic	Oxide Red	3009	Solid			
Orion	—(1)	Metallic	Oyster	7035	Solid			
Pegasus	—(1)	Metallic	Sargasso	5003	Solid			
Sirius	—(1)	Metallic	Slate Grey	7012	Solid			
Zeus	—(1)	Metallic	White	9010	Solid			
			White Matt	9010	Matt			
			Sirius Matt	9006	Matt			
			Orion Matt	9007	Matt			
			Zeus Matt	—(1)	Matt			

(1) These colours do not have equivalent RAL references.

2 Manufacture

2.1 In a coil-coating process, steel coil is degreased, chemically pre-treated and coated on the face and reverse sides.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process

- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of the manufacturer has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Lloyd's Register Quality Assurance Limited (Certificate 10052850).

3 Delivery and site handling

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

3.2 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.

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

3.4 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 should be handled in accordance with the Manual Handling Operations Regulations 1992 (as amended).

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

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Colorcoat Prisma.

Design Considerations

4 Use

4.1 The products, after roll-forming or brake-pressing, are suitable for external use as roofing and cladding, or for internal use as a lining.

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

5 Practicability of installation

The products are designed to be installed by operatives experienced with these types of products.

6 Weathertightness

The products, when incorporated into a roofing or cladding system designed and installed in accordance with conventional good practice and section 14 of this Certificate, will adequately resist the passage of moisture.

7 Resistance to wind uplift

The products, when incorporated into a cladding or roofing system designed by a suitably competent and experienced individual and installed in accordance with conventional good practice and section 14 of this Certificate, can adequately resist the wind loads likely to be encountered in the UK.

8 Properties in relation to fire

8.1 Constructions incorporating the products achieved the reaction to fire classifications shown in Table 3. This classification may not be achieved by lower thicknesses of the products or other constructions, and their classifications and permissible areas of use should be established in accordance with the requirements of the documents supporting the national Building Regulations.

Table 3 Reaction to fire classifications

Classification	Product	Construction	Method/report reference
A1	Colorcoat Prisma, Solid, Matt or Metallic, ≥0.40 mm thick in any colour and a 10 µm polyester reverse side coating	with an air gap of ≥80mm over any A2-s1, d0 or better substrate with a density ≥870 kg·m^{-2} and a thickness of ≥9 mm(2)	BS EN 13501-1 : 2018/ WF 428213(1)
A1	Colorcoat Prisma, Element, ≥0.40 mm thick in any colour and a 10 µm polyester reverse side coating	With or without an air gap over any A2 or better substrate with a density ≥ 800 kg·m^{-2} and a thickness of ≥ 9 mm(2)	BS EN 13501-1 : 2018/ WF 429746 (1)
A2-s1, d0	Colorcoat Prisma Textured, Solid and Metallic, ≥0.46 mm thick in any colour and a 10 µm polyester reverse side coating	With an air gap of ≥160mm over any A2-s1, d0 or better substrate with a density ≥652.5kg·m^{-2} and a thickness of ≥9 mm(2)	BS EN 13501-1 : 2018/ WF 504598(1)
Not declared	Reverse surface facing into a cavity		

(1) Copies available from the Certificate holder.
(2) The depth of the profiled products' corrugations is to be a maximum of 165 mm.

8.2 Designers should refer to the relevant national Building Regulations and guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity barriers, service penetrations and combustibility limitations for other materials and components used in the overall construction (for example, thermal insulation).

External roofing

8.3 The products, in isolation, are unrestricted in terms of proximity to a boundary in accordance with Commission Decision 2000/553/EC. See also section 8.8 of this Certificate.

8.4 This may not be achieved by other constructions and can also be affected by other components of the roof, eg insulation materials, substrates/decking and membranes. These constructions should therefore be evaluated by reference to the requirements of the documents supporting the relevant national Building Regulations and any consequent restrictions imposed by those documents, on a case-by-case basis. In the absence of a rating, these constructions should not be used within 20 metres of a boundary in England, Wales and Northern Ireland, and 24 metres in Scotland.

8.5 In Wales and Northern Ireland, designers may refer to the relevant documents supporting the national Building Regulations for certain roof specifications that can achieve a notional B_{ROOF}(t4) designation without testing and are consequently unrestricted with respect to proximity to a boundary.

8.6 Where the products are to be carried over compartment walls, designers must ensure that the roof/wall junction detail provides sufficient resistance to fire penetrating into the neighbouring compartment.

External wall cladding

8.7 The constructions described in Table 3 of this Certificate are not subject to any restriction on building height or proximity to boundaries.

Internal lining

8.8 The constructions described in Table 3 of this Certificate are unrestricted by the documents supporting the national Building Regulations.

9 Location

9.1 The extent of impact damage which the products may sustain in service will depend on their location, the design of the cladding and the nature of the supporting structure. The products are considered 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. The products are therefore suitable for use in categories C to F, as described in Table 4.

Table 4 Access categories

Category	Description	Examples	
C	Accessible primarily 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
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 path	
E	Above zone of normal impacts from people but liable to impacts from thrown or kicked objects	1.5 to 6 m above pedestrian or floor level in public areas	
F	Above zone of normal impacts from people but not liable to impacts from thrown or kicked objects	Wall surfaces at higher positions than those defined in E above	

9.2 The impact resistance of the products is determined by the thickness and impact resistance of the steel on which they are based. Adhesion failure of the coating will not normally occur, although hairline cracks may occur in areas of high stress.

10 Workability

10.1 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 to prevent any damage to the coating, and that any swarf is removed.

10.2 The coating can withstand a 0.5T bend through 180° without damage at 16°C and above.

11 Maintenance

11.1 In some areas (eg coastal and industrial areas, and where cladding is sheltered directly beneath a soffit), it may 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 Maintenance painting should be considered at the intervals defined in section 12.4, or earlier if a high aesthetic standard is required. The Certificate holder can recommend a suitable maintenance system.

11.3 Regular maintenance inspections should be carried out to ensure that rainwater goods are present and in good order, that flashings are secure and that fixings are present and secure.

12 Durability

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

12.2 Particular care should be taken during design to minimise the exposure of cut edges of the installed sheets. This could include the use of welted seams, secret-fix systems, continuous ridge to eaves installation (ie without horizontal lap joints) or installation of a curved roof.

12.3 The products coating and metal treatment will protect the steel substrate against corrosion for a period in excess of 40 years in normal industrial, urban and rural environments.

12.4 The performance of the coating will depend on the coating specification, its environment, location, aspect face and use (ie roofing or cladding). The Solid, Metallic and Matt ranges of the coated products will retain a good appearance for at least 30 years in non-corrosive environments and at least 20 years in coastal or severe industrial environments. The Elements range of the coated product will retain a good appearance for at least 25 years in non-corrosive environments and at least 15 years in coastal or severe industrial environments.

12.5 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.

13 Reuse and recyclability

The products contain steel, which can be recycled.

Installation

14 Procedure

14.1 The installation should be designed and carried out in accordance with European Convention for the Construction of Steelwork (ECCS) European Recommendations for Steel Construction:

- Publication No 40 *The Design of Profiled Sheeting*
- Publication No 41 *Good Practice in Steel Cladding and Roofing*

and with the relevant parts of:

- BS 5250 : 2021
- BS 5427-1 : 1996
- *National Federation of Roofing Contractors Profiled sheet metal roofing and cladding — A guide to good practice*
- MCRMA(1) *Technical Paper No 5 — Metal Wall Cladding Detailing Guide*
- MCRMA(1) *Technical Paper No 6 — Profiled Metal Roofing Design Guide*
- MCRMA(1) *Technical Paper No 11 — Flashings for metal roof and wall cladding*
- MCRMA(1) *Technical Paper No 12 — Fasteners for metal roof and wall cladding : Design, detailing and installation guide.*

(1) The Metal Cladding and Roofing Manufacturers Association.

14.2 Fixings should be selected in accordance with ECCS Publication No 35 *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

15 Tests

Tests were carried out, and the results evaluated, to determine:

- adhesion to substrate
- resistance to abrasion
- resistance to scratching
- resistance to artificial ageing
- resistance to water soak
- resistance to salt spray.

16 Investigations

16.1 Independent test data were examined relating to surface spread of flame to BS EN 13501-1 : 2018.

16.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

Bibliography

BS 5250 : 2021 *Code of practice for control of condensation in buildings*

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

BS EN 10346 : 2015 *Continuously hot-dip coated steel flat products for cold forming — Technical delivery conditions*

BS EN 13501-1 : 2018 *Fire classification of construction products and building elements. Classification using data from reaction to fire tests.*

BS EN ISO 9001 : 2015 *Quality management systems — Requirements*

17 Conditions

17.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- 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.

17.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and 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.

17.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

17.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- 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
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

17.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal 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, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue 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.