

Firststeel Coated Strip

Construction products

Pre-finished steel and aluminium for bespoke construction applications

The Sector

This datasheet refers to products that are suitable for use in construction applications where aesthetics and long lasting performance are important. Applications include rainwater goods, soffits, fascias, flashing and capping strips, window frames and standing seam roofing profiles.

Abrasion Resistant Products

Ideally suited to applications where there is a potential for damage from handling and processing. The product consists of a metal substrate with a long lasting, abrasion resistant and durable polyurethane or polyester topcoat. The topcoat texture can be tailored to create a distinctive look and a high gloss effect can be achieved which compliments PVC window frames and doors. Other texture levels can create a more natural effect resembling stone or concrete.

The product is flexible, even at low temperatures allowing for ease of processing, particularly with on-site roll forming operations. The product provides good colour and gloss retention. Special effects include high quality wood grain and other customised prints. The topside abrasion resistant coating can either be applied with a low cost backing coat or to both sides of the metal substrate. Non standard colours are available on request.

Decorative Products

Ideally suited to applications that demand superior aesthetics. The product consists of a metal substrate with a durable, weather resistant PVDF topcoat. It is flexible and offers excellent colour and gloss retention. Suitable for use where there is little possibility of impact or abrasion damage, the product is available in a wide range of solid, metallic and pearlescent effects. The decorative coating can either be applied with a low cost backing coat or to both sides of the metal substrate.

Design Information

The products can be roll-formed into exterior cladding components and rainwater goods, the latter in-situ to form seamless gutters and down pipe profiles, soffits and fascias. They can also be brake-pressed into associated flashings and fittings or used as flat sheet. They can be bent, drilled, punched and cut using conventional tools.

As indicated by the BBA certificate (93/2887), the products will perform effectively as a cladding or gutter system with an ultimate life of at least 30 years. Where a PVDF topcoat is used, over-painting may be necessary to restore the sheets appearance after 15 years. For polyurethane topcoats, the product will have a minimum decorative life of 15 years in industrial environments and 20 years in less aggressive environments. Polyester topcoats are not as durable as other topcoats and so it is recommended that maintenance painting is carried out after 10 years in industrial environments or after 15 years in less aggressive environments.

Maintenance

In some areas, such as in industrial environments where cladding is sheltered directly beneath a soffit, it may be necessary to clean the product periodically, both to restore appearance and remove potentially corrosive deposits. This can be done by hosing with water, using a mild detergent.

Typical Properties

Topcoat	DFT	Gloss	Flexibility	Hardness	Scratch resistance	Humidity (1000 hours)	QUVA (2000 light hours)	QUVB (500 light hours)				
		ECCA T2	ECCA T7[1]	ECCA T4	ISO1518	DIN 50017[2]	ASTMG53					
			No tape off	No cracks			Gloss retention	Change in E units				
Abrasion Resistant	Polyurethane	20-27	30-80%	0-1.0T	0-1.0T	H-2H	>2000 grams	1000	>80%	<3	>80%	<5
	Polyester	18-27	10-80%	0.5-1.0T	0-1.0T	H-2H	>1500 grams	1000	>70%	<3	>10%	<5
Decorative	PVDF	22-28	10-40%	0-1.0T	0.5-1.0T	F-H	-	1000	100%	<1	>85%	<2
	PVDF Pearlescent	22-28	10-40%	0-1.0T	0.5-1.0T	F-H	-	1000	>90%	<2	>85%	<2

[1] On aluminium substrate

[2] On hot-dipped galvanised substrate, product unaffected

Substrate Selection

All products are available on aluminium alloys (EN 573/485/515), hot-dipped galvanised steel (EN 10326 and 10327) and stainless steel (EN 10088). Aluminium substrates are very durable and provide excellent strength to weight characteristics. Although it may be exposed at cut edges, the substrate will perform satisfactorily in all normal atmospheric conditions including marine and industrial, but excluding the immediate vicinity of, and downwind from, sources of corrosive contaminants such as from chemical works, cement works or copper foundries. Hot-dipped galvanised steel substrates are long-lasting providing that cut-edges are not exposed and that damage to the coating is treated promptly. Stainless steel substrates are very durable with good strength characteristics.

Any fixings used to erect the product must be compatible with the substrate material in order to avoid accelerated corrosion.

Fire Performance

When tested to BS 476: Part 6: 1989 and to Part 7: 1987, all products have a Class 0 surface as defined in the Building Regulations.

Indices of performance (BS 476 Part 6)			
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Abrasion Resistant	Polyurethane	2.6	2.3
	Polyester	2.6	1.5
Decorative	PVDF	1.9	1.4

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Dimensional Capability and Further Processing

Products come in widths ranging from 6.5 mm up to a maximum of 640 mm, and in gauges from 0.15 mm to 1.6 mm for ferrous substrates and 2.0 mm for aluminium. The products can be supplied as wide coil, slit coil down to 6.5 mm wide and blanks.

Delivery and Site Handling

The products are normally delivered to site as profiled components and flashings. During transport, edges and corners of the sheets must be protected against damage, and the sheets restrained to prevent abrasion. On site, we recommend that 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. When required for installation, sheets should be lifted from the stack rather than dragged across it.

Contact Details

Contact Firsteel for more information and technical advice or to request samples.

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