Promat

PROMATECT®–XW

Providing fire protection to structural steel for up to 60 minutes

FULLY TESTED
AT LIMITING TEMPERATURES
FROM 300°C TO 650°C

UP TO
6 MONTHS
WEATHER EXPOSURE

High performing fire protection board with excellent weather resistance and fast installation

PROMAT.COM

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For archived versions please contact technical services.

etex inspiring ways of living

Promat is the global leader in passive fire protection

We offer you a complete portfolio of certified and tested products and systems to design and build a fully reliable fire safety solution for your building project.

With more than 60 years of experience and know-how, we are ready to help you protect people, buildings and assets.
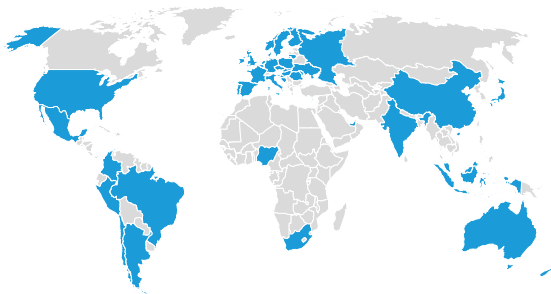
OUR MISSION

We want to make the world safer, healthier and more sustainable for the generations of today and tomorrow.

Safety is a concept people need in order to grow, prosper and enjoy life, yet we take it for granted every day. This is why we offer the highest standard in fire safety for homes, offices, schools, hospitals, shopping malls and airports.

As the way we live, work and build constantly evolves, Promat wants to help maintain the highest level of fire safety. We offer you new products and innovations, so together, we can make this world a safer place.

PROMATECT®-XW is an A1 non-combustible board which provides up to 60 minutes fire protection to structural steel

PROMATECT®-XW has permanent dimensional stability, so in the event of a fire it reduces the speed at which the steelwork will heat up, allowing it to maintain its load bearing capacity for longer.

PROMATECT®-XW is manufactured at our Etex manufacturing plant in Germany. The plant works to ISO 9001, ISO 14001 and ISO 45001 standards.

UP TO 60 MINUTES FIRE PROTECTION

MOISTURE RESISTANT

Product Overview

PROMATECT®-XW is used to provide one, two, three or four sided encasements to:

– Universal columns and beams (I or H sections) and joists
– Beams supporting composite floors with profiled metal decking
– Structural hollow sections
– Partially exposed members
– Perimeter beams
– Lattice beams
– Wind posts
– Bracing

PROMATECT®-XW is a high performance, water repellent, fire protection board with superior weather protection.

Benefits
- Dimensionally stable
- Quick, easy to cut and install saving time and reducing installed cost
- Frameless system minimises space
- Single board thickness for ease of ordering and stocking
- No requirement for adhesive or joint fillers
- Smooth, impact resistant surface
- Water, weather and mould resistant
- **Can be installed and left exposed for up to 6 months on site***
- **Tested to BS 476:Part 21:1987**
- **Third Party assessed by Certifire CF5942**
- High levels of fire protection to structural steelwork.
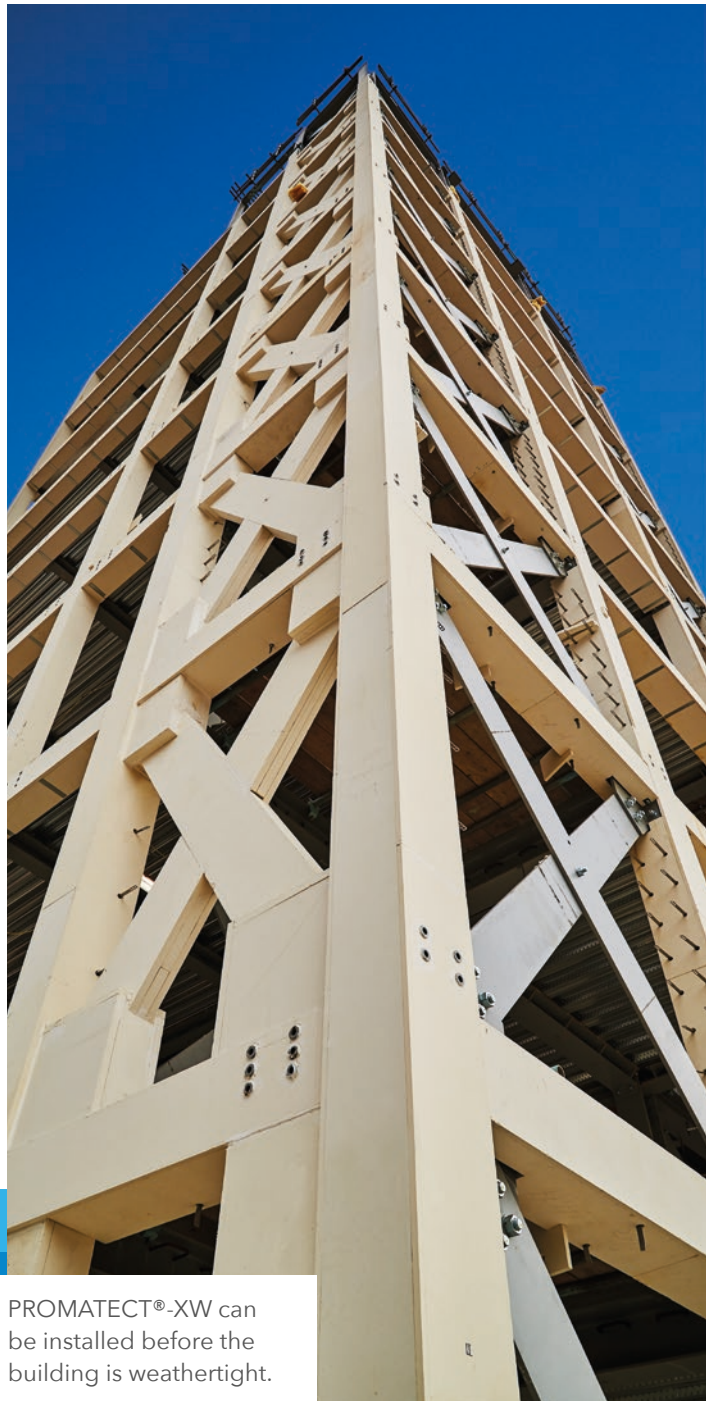
PROMATECT®-XW can be installed before the building is weathertight.

*To protect from driving rain it is recommended that a bead of PROMASEAL® Silicone Sealant is applied at the cut edges after the boards are butted together and smoothed over the joint and exposed edge rather than applying between the edges and squeezing together.

PROMATECT®-XW is typically used:
- In any project where there is a requirement for up to 60 minutes fire protection
- In the early construction phase when the building is not weathertight
- Where space is limited, and speed of installation is important.

Design Benefits

Fully tested and certified

Since the Grenfell tragedy, the performance of building materials is under an unprecedented spotlight.

Promat is driven by an uncompromising attitude to fire protection. Specifiers can be confident of the performance of PROMATECT®-XW due to it being fully tested and fit for purpose.

PROMATECT®-XW is:
- Manufactured by the Etex Group under ISO 9001, ISO 14001 and ISO 45001 conditions and is thus fully traceable
- Independently tested and assessed by Certifire CF5942
- Also tested as part of a whole system to assess its interaction with other building components.

THIRD PARTY CERTIFICATION

PROMATECT®-XW has been independently assessed by Certifire CF5942.

'REAL LIFE' TESTING

Promat products are tested as part of a whole system, not just as a product, to assess their interaction with other building components.

RAW MATERIALS

All of the raw materials used by the Etex Group have been responsibly sourced from its trusted suppliers.

MANUFACTURE

Manufactured within the Etex Group under ISO 9001, ISO 14001 and ISO 45001 conditions.

FULLY TRACEABLE

Our products and processes are fully traceable.

Design Benefits

Performance

PROMATECT®-XW provides a clean, impact resistant finish and is used where the fire protection system is in full view and where it is hidden.

It offers the specifier a clean, boxed appearance and can be applied on unpainted steelwork. It is often a thinner solution in comparison with other fire-resistant constructions.

It can also accept a decorative finish and therefore be used where aesthetics are important.

UP TO 6 MONTHS WEATHER EXPOSURE*
PLEASE SEE PROMAT WEBSITE FOR MORE DETAILS.

FIRE RESISTANT

Classified A1 non-combustible to EN 13501-1.

MOISTURE RESISTANT

Can be installed up to 6 months before the building is weather tight.

MOULD RESISTANT

Resistant to the effects of moisture.

COMPREHENSIVELY STRONG

Galvanised steel partition sections can be installed directly up to the face of the board.

FLEXIBLE

PROMATECT®-XW is often a thinner solution in comparison to other fire-resistant constructions.

DURABLE

PROMATECT®-XW will not degrade by age and has good impact strength.
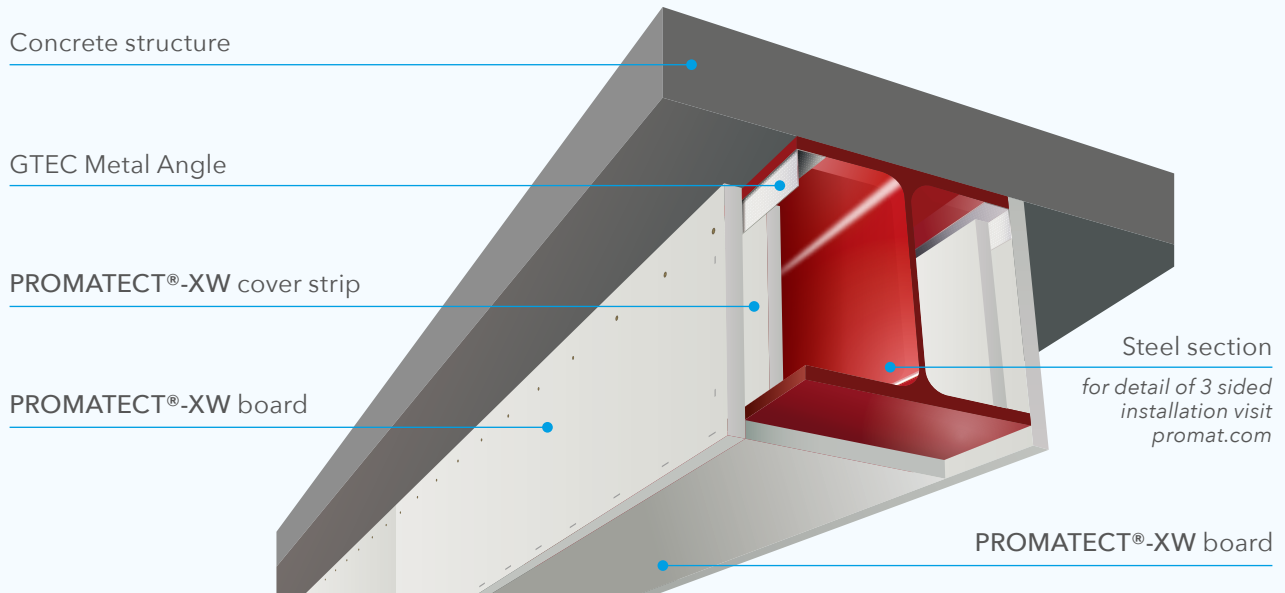
EASY TO DECORATE

With a smooth, decorative finish.

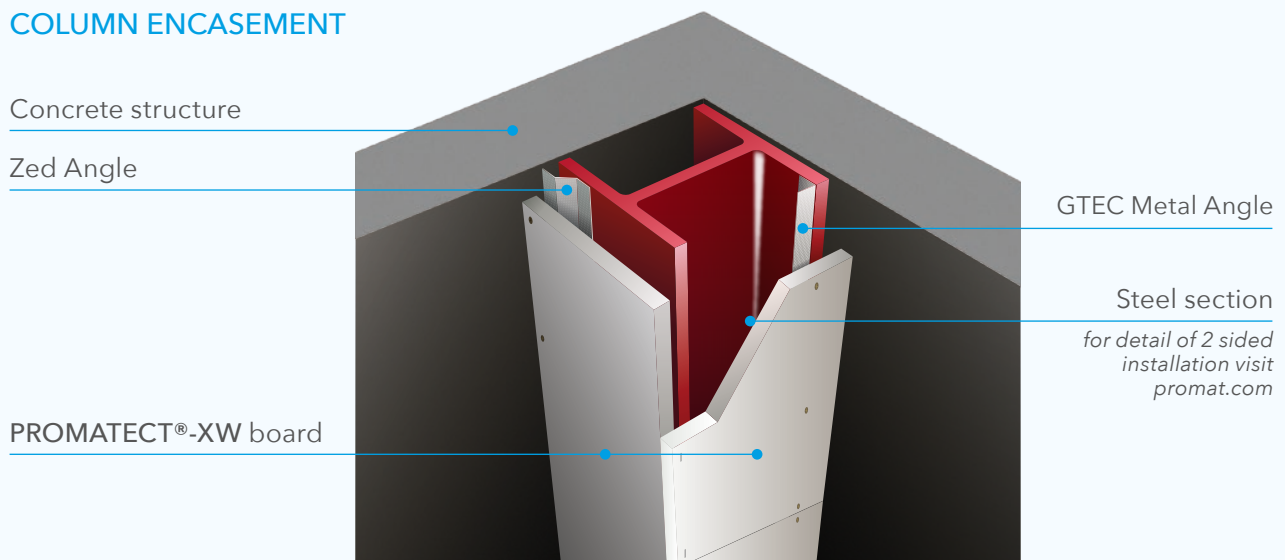**To protect from driving rain it is recommended that a bead of PROMASEAL® Silicone Sealant is applied at the cut edges after the boards are butted together and smoothed over the joint and exposed edge rather than applying between the edges and squeezing together.*

A thin solution for structural steel protection

BEAM ENCASEMENT

Concrete structure

GTEC Metal Angle

PROMATECT®-XW cover strip

PROMATECT®-XW board

Steel section

for detail of 3 sided installation visit promat.com

PROMATECT®-XW board

COLUMN ENCASEMENT

Concrete structure

Zed Angle

GTEC Metal Angle

Steel section

for detail of 2 sided installation visit promat.com

PROMATECT®-XW board

Specifying PROMATECT®-XW

PROMATECT®-XW provides up to 60 minutes fire resistance and is supplied in 15mm thickness for ease of specification and stocking.

SPECIFICATION IS BASED ON 3 FACTORS

1

THE SECTION FACTOR OF THE STEEL (A/V)*

2

THE LIMITING TEMPERATURE FOR THE STEEL

3

WHETHER THE STEEL SECTION IS A BEAM OR A COLUMN

As advised by the structural engineer or structural steel manufacturer.

PROMATECT®-XW IS FULLY TESTED AT LIMITING TEMPERATURES FROM 300°C TO 650°C.
PLEASE SEE PROMAT WEBSITE FOR MORE DETAILS.

A/V Ratio for Beam Encasements

		PROMATECT® -XW (15mm)	
		Fire Resistance Period	
		30 (mins)	60 (mins)
LIMITING STEEL TEMPERATURE	300°C	365	90
	350°C	365	105
	400°C	365	135
	450°C	365	160
	500°C	365	200
	550°C	365	245
	600°C	365	310
	650°C	365	365

A/V Ratio for Column Encasements

|		PROMATECT® -XW (15mm)	
		Fire Resistance Period	
		30 (mins)	60 (mins)
LIMITING STEEL TEMPERATURE	300°C	220	60
	350°C	290	70
	400°C	365	85
	450°C	365	105
	500°C	365	120
	550°C	365	140
	600°C	365	155
	650°C	365	180

A/V RATIO FOR COLUMN AND BEAM ENCASEMENTS

*The section factor of the steel is based on the size of the steel and the number of sides exposed to the fire. The A/V ratios for steel sizes can be manually calculated or can be found in the Promat Passive Fire Protection Handbook (or the ASFP Yellow Book).
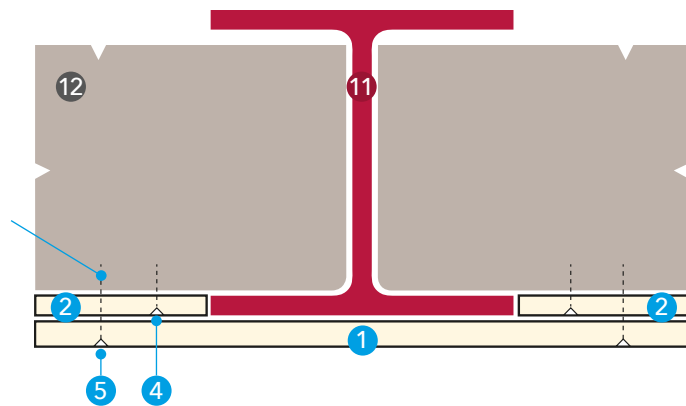
Design Guide

The following diagrams provide guidance
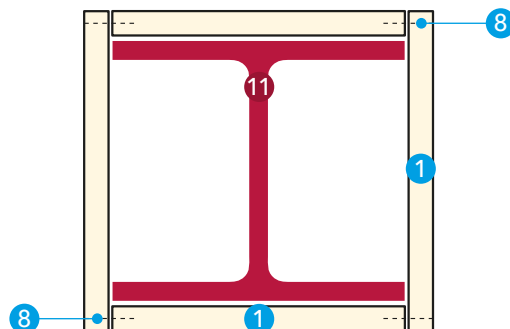on the most common construction details.
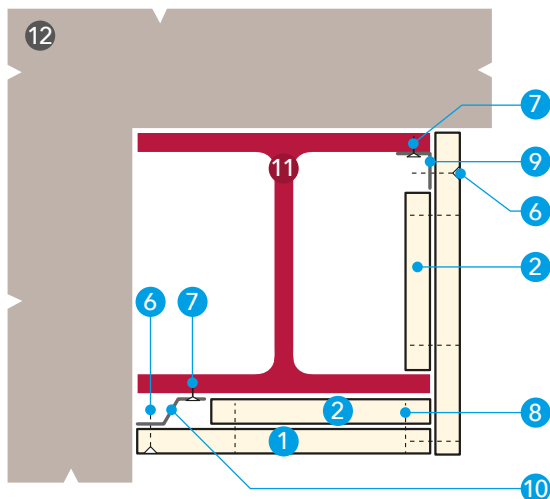
**1-SIDED
ENCASEMENT
TO COLUMNS**
(1 layer)
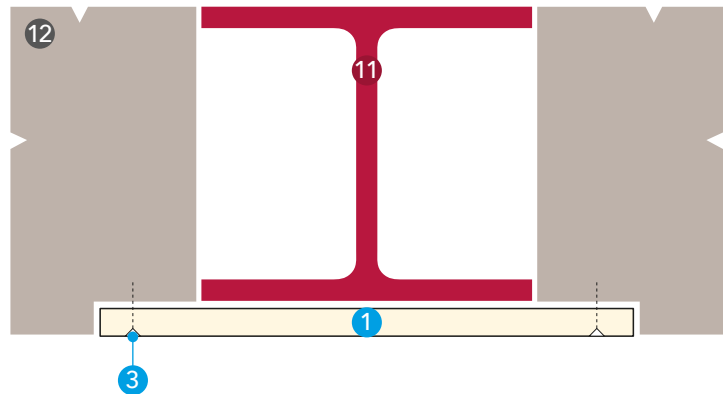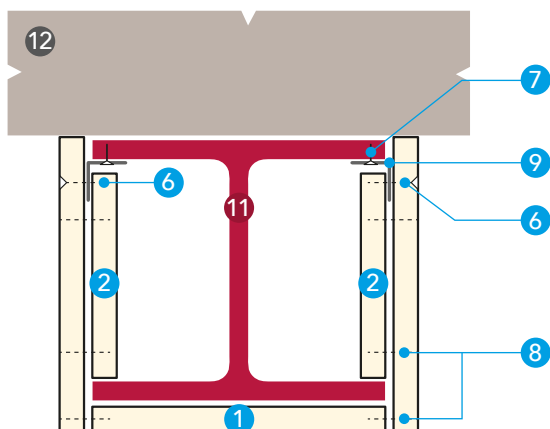

**1-SIDED
ENCASEMENT
TO COLUMNS**
(1 layer)

**4-SIDED BOX
ENCASEMENT
TO COLUMNS**
(1 layer)

2-SIDED ENCASEMENT TO COLUMNS OR BEAMS
(1 layer)

NOTE: For columns, joints should be staggered between adjacent faces by 500mm. (Columns do not require internal cover strips behind flange panel joints.)

3-SIDED BOX ENCASEMENT TO BEAM
(1 layer)

1. PROMATECT®-XW board
2. PROMATECT®-XW cover strips (120mm wide)
3. Minimum M4 x 50mm steel screws with metal plug or M6 x 50mm concrete screws at 300mm centres
4. Minimum M4 x 50mm steel screws with metal plug or M6 x 50mm concrete screws at 600mm centres
5. Minimum M4 x 65mm steel screws with metal plug or M6 x 65mm concrete screws at 300mm centres
6. M3.5 x 32mm GTEC self tapping screws
7. M4 GTEC Wafer Head self drilling screw or shot-fire nails
8. Staples
9. GTEC Metal Angle 90°
10. Zed angle
11. Steel section
12. Concrete structure

Step by Step Guide

Fire protection for column encasements (showing 4-sided encasement)

1 **MEASURE FOR FLANGE PANEL**
Measure the flange of the structural steel column plus 3-4mm.
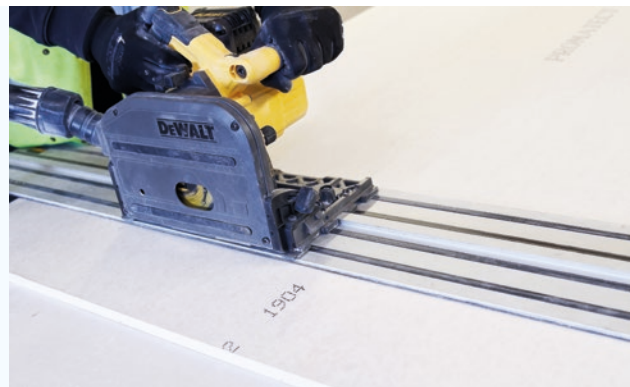

2 **MARK UP FLANGE PANEL**
Mark up PROMATECT®-XW board to fit flange plus 3-4mm.

3 **CUT FLANGE PANEL**
Cut boards using a hand saw with hardened teeth or a power circular saw in conjunction with tungsten carbide tipped blades, or a jigsaw. All cutting should be carried out in well ventilated spaces, using dust extractors. Operators should wear protective face masks.

Please see product safety data sheet for further guidance.

4 **COLUMN TO BEAM JUNCTION**
Mark up, cut and fit boards around junctions by butt jointing the square edges of PROMATECT®-XW.

5 **MEASURE FOR WEB PANEL**

Measure the web of the structural steel column plus the thickness of the two PROMATECT®-XW flange panels (+30mm).

Note: Stagger joints on adjacent faces by at least 500mm.

6 **MARK UP WEB PANEL**

Mark up and cut PROMATECT®-XW board to the dimensions in step 5.

(measure twice, cut once!)

7 **FIXING WEB PANEL TO FLANGE PANEL**

Clamp board around steel to ensure tight fit. Fix web panels to flange panels using staples.

Staple details

Material:	Galvanised steel
Length:	35mm
Width:	1.45mm
Crown:	10.5mm
Thickness:	1.3mm
Fixing centres (max):	100mm

Fire protection for column encasements
(showing 4-sided encasement) (continued)

Fix board at a minimum of 25mm and a maximum 50mm from cut edge.

Fix remainder of boards using staples fixed at least 12mm from the edge and at maximum 100mm centres.

Soldiers are optional for a 4 sided column encasement. Adding soldiers will improve the stability of the casing. If required, a filler may be used to finish joints before decoration.

Adhesives are not required.

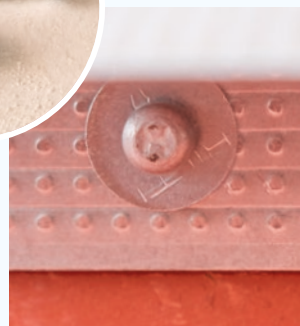*Note: Stagger joints on adjacent faces by at least 500mm.*

Step by Step Guide

Fire protection for beam encasements (showing 3-sided encasement)

1 FIXING STEEL ANGLE

Fix 50mm x 25mm x 0.7mm GTEC Metal Angle 90° to the underside of the top flange of the structural steel beam, using 3.7mm x 16mm shot-fire nails or GTEC Wafer Head Self Drilling screws at 300mm centres.

2 MEASURE FOR WEB PANEL

Measure depth between the soffit and the bottom edge of the flange and add the thickness of the PROMATECT ®-XW flange panel (+15mm).

FLANGE PANEL

Fire protection for beam encasements
(showing 3-sided encasement) (continued)

3 **MEASURE WEB PANEL**

Measure, mark up and cut PROMATECT®-XW boards to the dimensions in step 2, plus an additional 3-4mm.

4 **FIXING WEB PANEL**

Fix web panels to steel angle using GTEC High Thread screws spaced at 300mm centres. Screws should be approximately half way down the angle.

First fixing 50mm from board edge, second fixing, 300mm from board edge and then at 300mm centres.

Repeat process on other side of steel beam, fixing into angle as detailed above.

5 **PLACING COVER STRIP**

Install 120mm wide cover strips behind the web panel joints. These should extend up behind the angle and are fixed with staples at maximum 100mm centres.

6 **FLANGE PANEL**

Measure, mark up and cut flange panel to fit between web panels.

Fire protection for beam encasements (showing 3-sided encasement) (continued)

7 FIXING FLANGE PANEL

Staple flange panels into position through the face of web panels at maximum 100mm centres.

Fixings should be a minimum 25mm and maximum 50mm from each end of flange panel. There is no need to stagger joints between faces.

Repeat process on reverse side of beam.

Staple details

Material:	Galvanised steel
Length:	35mm
Width:	1.45mm
Crown:	10.5mm
Thickness:	1.3mm
Fixing centres (max):	100mm

8 COMPLETED BEAM WITH COVER STRIP

Finishing

Plastering and painting

Plastering

If a skim coat is required, apply a sealing coat of diluted universal primer/PVA (e.g. 1 part PVA and 5 parts water). Sealing coat should be allowed to dry thoroughly (approximately 24 hours). Apply bonding coat (3 parts PVA and 1 part water).

Apply plaster skim (3mm thick) while the bonding coat is wet and tacky.

It is recommended that a small test area is plastered initially to ensure that the boards have been adequately sealed. Jute Scrim (Hessian) can be applied to all joints and internal corners, or alternatively Joint Tape (Paper Tape) can be used. **Self Adhesive Scrim (Patch Tape) is not recommended.**

The plaster manufacturers' recommendations should be followed at all times.

Painting

Promat boards have an attractive, smooth finish but if required they can be painted with emulsion or water based paints. With water based paints, a diluted first coat should be used.

All coatings should be supplied by a reputable manufacturer and their recommendations regarding surface preparation, sealing and finish coat should be followed at all times.

Technical Characteristics

PROMATECT®-XW	
Product Code	194712
Width x Length (mm)	1200 x 2500
Thickness (mm)	15
Edge	Square
Approx weight (dry, kg/m²)	14.0
Approx weight (5% moisture, kg/m²)	14.7

Our technical support for your next project

We understand that designing and building a passive fire protection solution is often not an easy task.

We can help you to interpret your local regulations and assess the risks in your building project that demand a reliable fire safety solution.

We can provide you with a full technical report and all the supporting documents you need to finalise your design and start the building process.

We offer you technical support and practical advice to deliver a perfect fire safety job.

Do not hesitate to contact us.

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