

Promat



Installation Guideline

PROMATECT[®]-XS

Second Generation Fire Protective Board
Fire protection of structural steelworks



PROMATECT®-XS

Introduction

Promat is the leading manufacturer of fire resistant materials that offers solutions for passive fire protection of steel structures. The complete solution range of fire protection of steel structures can be delivered by a single supplier. With our support during the design and application you can choose the optimal solution for your project. Safe, economical and peace of mind.

We ensure high fire resistance during the time. Considering the working life foreseen in Eurocodes, our products with high proven durability reduce maintenance costs throughout the designed life of a building. Promat is a large company with strong traditions and long history. We can offer long-term fire safety in your buildings, giving you peace of mind.

Thanks to the synergy between different technologies used in the Etex Group, Promat has developed a new fire protective product called PROMATECT®-XS. It is the outcome of an intense R&D work involving our best internal experts in material science, passive fire protection and manufacturing processes, reinforced by our 50 years of proven track records in delivering durable fire compartmentation solutions to ensure fire safety in buildings.

Description of PROMATECT®-XS

PROMATECT®-XS is an innovative high performing fire protective board, specifically designed for the fire protection of structural steel elements such as beams and columns, in either opened or hollow sections. The second generation of the product combines efficient fire protection with unique ease of installation, high quality surface finishing and enhanced mould and moisture resistance.

PROMATECT®-XS can be applied directly on the steel structures, without the need of any secondary substructures like steel angles, clips or other ancillary products. PROMATECT®-XS is a non-combustible product, based on PromaX® technology, which contributes to the fire rating of steel structures, tested according to the most severe international standards. The degree of fire protection depends on mass factor (S/V) and the required critical design temperature of the metal element.

PROMATECT®-XS has a durability of at least 25 years, that is the highest design working life foreseen by the EU regulation, and is extremely easy to maintain and repair (reparation doesn't affect the fire resistance).

Sustainability, long durability, workability, good quality of finish and excellent fire behaviour are the main characteristics of PROMATECT®-XS.

Applications

Fire protective board for steel structures (beams and column) with either open or hollow sections, from R30 up to R180

Advantages of PROMATECT®-XS

- Outstanding performances for steel protection up to R 180: one of the thinnest board's solution on the market for fire protection
- Fully incombustible with a reaction to fire class A1 according to EN 13501-1.
- Fully recyclable
- High durability (25 years) for internal and external semi exposed applications, with maintenance and repairs system tested and approved in fire condition.
- CE marked as fire protective board (intended use: fire resistance) according EAD 350142-00-1106 (former ETAG 018-4), under full ETA certification with manufacturing plant under third party factory production control.
- Tests carried out by official laboratories according to the most advanced international standards integrated by additional voluntary tests to prove the performance beyond the standard requirements
- The steel columns and beams encasement does not require any additional substructure, which significantly increases the efficiency of the solution by reducing the installation time, costs and spaces.
- Lightweight panels for a fast and ergonomic installation
- Quick and simple installation using staples and wedge soldiers, no steel angles nor metallic clips required. No need for glue nor joint filler. Less material to order, to stock, to handle, to install and less waste.
- High quality surface finishing, excellent workability and easy cutting even with a knife (score&snap).
- High efficiency, low dust and simple cleaning of equipment when cutting with electric saw.
- Temporary resistant to high humidity, weather and mould: can be installed before the building is weathertight (up to 6 months in semi-exposed conditions)*.

*PROMATECT-XS is not intended to be exposed to stagnant water (e.g. puddles) nor to driving rain for long period. If temporary exposure to driving rain is expected, sealing the edges is recommended.

Storage and handling

- The boards are delivered on pallets.
- Store the boards on a flat surface, under cover, in a dry and ventilated space.
- The boards shall always be manipulated from the stack by two persons and then be transported vertically.
- Don't expose the boards to temperatures below 0°C when wet.

Cutting, installing and finishing

PROMATECT®-XS can be easily cut with a knife using the "score and snap" method (similar to plasterboards) or with an electric saw. Also when cutting with a knife a tight corner connection can be achieved, by lightly rasping the edge after cutting. For sawing of large quantities an electric saw with dust extraction is recommended.

For the encasement of steel columns and beams the boards are simply installed with staples in accordance with the assemblies described hereafter, with no need of any additional substructure nor glue. For fire resistance purpose, the joints between adjacent boards do not require any joint filler. For aesthetical reasons they can be finished with Promat® Filler PRO and Promat® Ready Mix PRO.

Minor damages and small holes in the board can be repaired with Promat Filler PRO.

PROMATECT®-XS board surface allows for most types of decoration. When applying a surface treatment, the absorption capacity and alkalinity of the boards have to be taken into account.

For safety information please refer to the PROMATECT®-XS safety information sheet available upon request.

Choice of thickness

- The required thickness of the fire protective cladding depends on the required fire resistance, the design temperature of the steel structure (the maximum allowed critical temperature of the steel member) and the A_p/V ratio. Please refer to the separate documentation to determine the required thickness of PROMATECT®-XS.
- Increasing the thickness of the cladding is allowed from the fire safety point of view.
- The thinner board should always be mounted on the thicker board.



PROMATECT®-XS

Protection of columns

General

- Cladding of steel column is generally done from four sides.
- Board joints and fixing heads do not require sealing or covering.
- At uneven bottom sides of floors, the joints between PROMATECT®-XS and the floor should be filled with Promat® Filler PRO or PROMASEAL®-A.



Installation of single layer of PROMATECT®-XS for columns

- Cut noggins 120mm wide from the PROMATECT®-XS board. The noggin should be sized such that it can be wedged between the flanges of the column. Once the noggin is cut, cut it at an angle of approximately 5° starting at approximately 50 mm from the top. This will create two wedges. These are installed so that the 120mm width is parallel to the column web and are flush with the flange tips. Place the two parts together and hammer to wedge them in place. Noggins are required at maximum 1200mm centres, in line with the joints of the boards.
- The boards facing the column's webs are fixed to noggins with staples. No gap or up to 5 mm can be present between the flange tips and those boards.
- The boards facing the column's flanges are fixed with staples in between the former boards. No gap or up to 50 mm can be present between the steel section flanges and those boards. No joint cover nor noggin is required for joints on the flanges.
- The boards are fixed to noggins and to other boards with staples at a maximum centre distance of 100mm. For staple length refer to dedicated table.
- No joint filler is needed.
- Noggins are not required for hollow sections and optional for I/H sections*

Installation of double layer of PROMATECT®-XS for columns

- Cut and install noggins as per the single layer system with the noggins installed in line with the joints of the first layer of board at maximum 1200mm centres.
- First layer of board installed in the same manner as the single layer construction.
- Board joints for the second layer should be staggered by 600mm from joints in the first layer.
- The second layer is installed in a similar manner with the board on the flange side installed between the boards on the web side.
- The boards are stapled to noggins and to other boards with staples at maximum centre distance of 100mm. Where board joints occur in the second layer, they should be stapled on each side of the joint to the first layer at 100mm centres. For staple length refer to dedicated table.
- No joint filler is needed.
- Noggins are not required for hollow sections and optional for I/H sections*



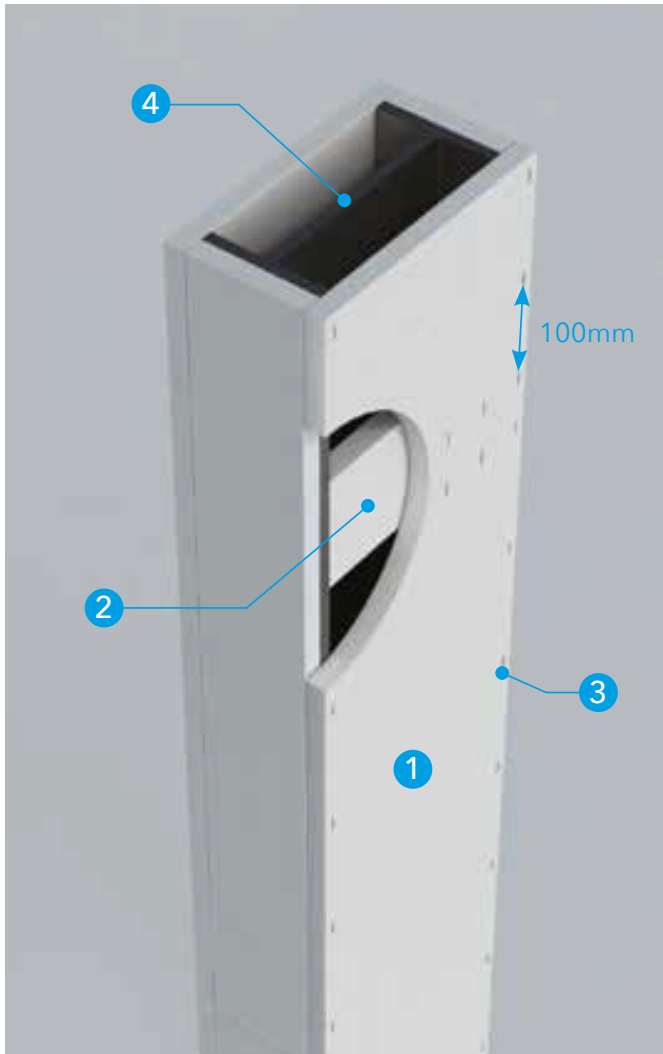
Example of noggin construction



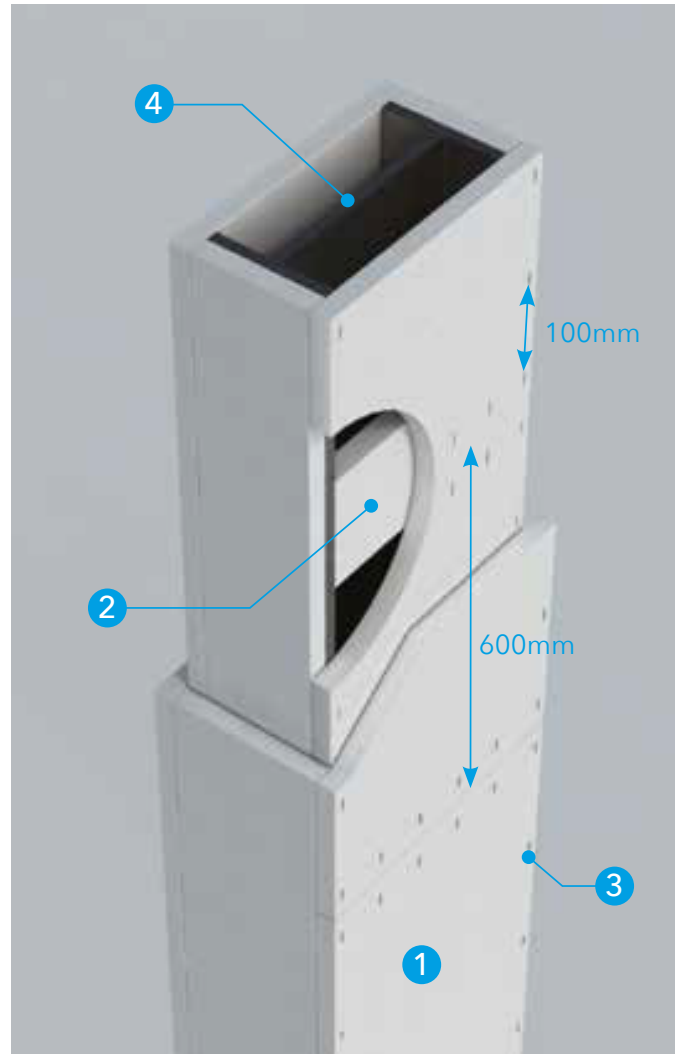
Protection of hollow sections

* For hollow section columns, PROMATECT®-XS boards are installed without noggins. In that case, applicable as an alternative also for open section columns, the boards of different faces are simply stapled one to each other, staggering the joints by minimum 500 mm from one face to the other. For no noggins installation, reference shall be made to the specific design table.

SINGLE LAYER PROTECTION



DOUBLE LAYER PROTECTION



- ① PROMATECT®-XS
- ② Noggin (optional) at max. 1200mm centres
- ③ Staple
- ④ Steel member

PROMATECT®-XS

Protection of beams

General

- Cladding of steel beams is generally done from three sides.
- PROMATECT®-XS noggin shall be adjusted in such a way that their outer noggins surfaces protrude about 5mm over the support flange. The cladding shall be fastened to the noggin.

Installation of single layer of PROMATECT®-XS for beams

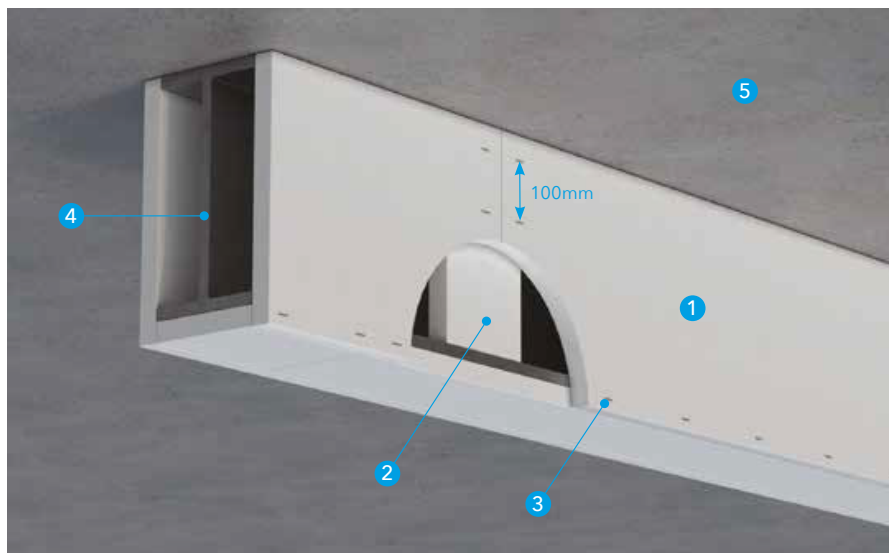
- Cut noggins 120mm wide from the PROMATECT®-XS board. The noggin should be sized such that it can be wedged between the flanges of the beam. Once the noggin is cut, cut it at an angle of approximately 5° starting at approximately 50 mm from one side. This will create two wedges. These are installed so that the 120mm width is parallel to the beam web and are protruding approximately 5mm from the flange tips. Place the two parts together and hammer to wedge them in place. Noggins are required at maximum 1200mm centres, in line with the joints of the side boards.
- The underside board is installed in between the two side boards, with a gap from 0 mm to 50 mm from the bottom flange, and does not require a noggin or coverstrip where board joints occur.
- Install the side boards first by fixing to the noggins with staples at 100mm centres. The underside board is then fitted between the side ones and fixed with staples at 100mm centres. For staple length refer to dedicated table.
- No joint filler is needed.

Installation of double layer of PROMATECT®-XS for beams

- Cut and install noggins as per the single layer system with the noggins installed in line with the joints of the first layer of side boards at maximum 1200mm centres.
- The first layer is installed in the same manner as the single layer.
- Board joints for the second layer should be staggered by 600mm from joints in the first layer.
- The second layer is installed in the same manner as the first with the underside board fitted between the two side boards.
- The boards are stapled to noggins and to other boards with staples at maximum centre distance of 100mm. Where board joints occur in the second layer, they should be stapled on each side of the joint to the first layer at 100mm centres. For staple length refer to dedicated table.
- No joint filler is needed.

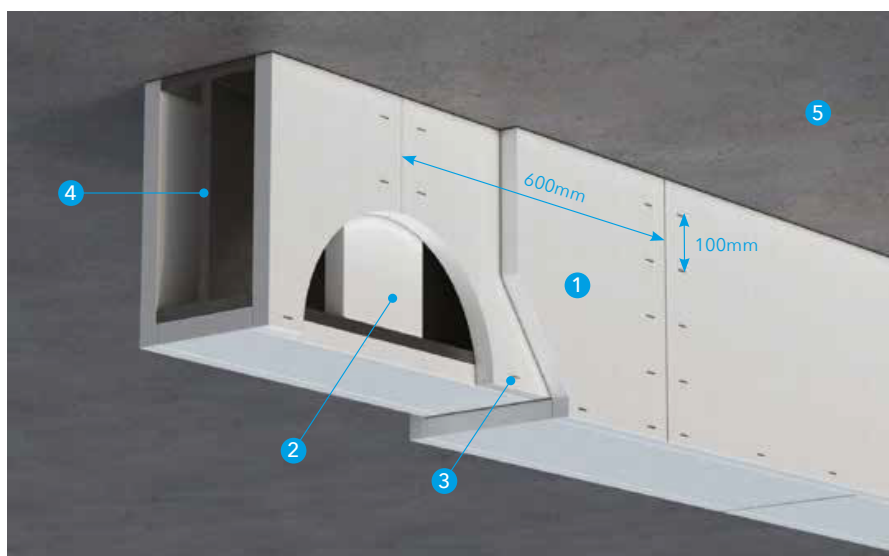


SINGLE LAYER PROTECTION



- 1 PROMATECT®-XS
- 2 Wedge noggin at max. 1200mm centres
- 3 Staple
- 4 Steel member
- 5 Concrete slab

DOUBLE LAYER PROTECTION



Staple length for board thickness:

Single and double layer cladding:

Type	Staples
Material	Steel
Dimensions	
for 12.5mm thick boards	Length 30mm, bridge 5.85mm, wire 1.27 x 1.05mm
for 15mm thick boards	Length 35mm, bridge 10.5mm, wire 1.45 x 1.30mm
for 20mm thick boards	Length 40mm, bridge 10.5mm, wire 1.45 x 1.30mm
for 25mm thick boards	Length 50mm, bridge 10.5mm, wire 1.45 x 1.30mm

Providing fire protection of steel structures at the construction site

- The required fire resistance is achieved only after proper and professional application of the construction product.
- The installer is responsible for the proper installation of the fire protective product and the applied material thickness, therefore responsible for the actually achieved fire resistance.
- The Installer must follow all requirements of the installation process to ensure that an approved system is installed.
- The installer should ensure that the system is suitable for the specific conditions in which it is to be installed.
- Contractor of the fire structure must be a trained professional or company. For details on installation guidelines, please contact your local Promat office.

Promat

www.promat.com

Headquarters – Belgium

Etex Building Performance NV

Bormstraat 24, 2830 Tisselt

T +32 15 718 100

F +32 15 718 109

E construction@promat.com

Australia

Promat Australia Pty Ltd

1 Scotland Road

SA 5031 Mile End South

T 1800 Promat (776 628)

F +61 8 8352 1014

E PAPL.mail@etexgroup.com

Austria

Etex Building Performance GmbH

St.-Peter-Straße 25 / Bau 39

4021 Linz/Austria

T +43 732 6912-0

F +43 732 6912 3740

E info.at@etexgroup.com

DVR-Nr.: 4011276

Chile

Promat Chile SA

Camino a Melipilla, Maipú

10803 Santiago

T +56 2 2391 2200

E contacto@promat.cl

China

Promat Shanghai Ltd

No.2, Tai Hua Street,

Yonghe Economic District,

511356 Guangzhou, Guangdong

T +86 (20) 8136 1167

F +86 (20) 3222 5275

E info@promat.com.cn

Colombia

Promat Colombia

Av. Kra 19 No. 120-71 Suite 506

110111 Bogotá D.C.

T +57 1 355 3500

F +57 1 355 1785

E info@promat.com.co

Croatia

Promat d.o.o. Podružnica Zagreb

Kovinska 4a

10090 Zagreb

T +385 1 3496 324

E promat.hr@etexgroup.com

Czech Republic

Promat sro

Evropská 11

160 00 Praha 6 – Dejvice

T +420 2 2439 0811

F +420 2 3333 3576

E promat@promatpraha.cz

Denmark

Promat Nordic

Kometvej 36, 6230 Rødovre

Etex Nordic A/S

Vendersgade 74, 7000 Fredericia

T +45 73 66 19 99

E promat-dk@etexgroup.com

France

Etex France Building Performance

500, rue Marcel Demonque

Zone Agroparc, CS 70088,

84915 Avignon Cedex 9

T +33 1 3979 6160

F +33 1 3971 1660

E info@promat.fr

Germany

Promat GmbH

Scheifenkamp 16

40878 Ratingen

T +49 2102 493 0

F +49 2102 493 111

E mail@promat.de

Hong Kong

Promat International (Asia Pacific) Ltd

Room 1010, C.C. Wu Building

302-308 Hennessy Road, Wanchai

T +852 2836 3692

E promat.hk@etexgroup.com

Hungary

T +36 30 541 8316

T +36 30 343 25 72

E promat.hu@etexgroup.com

India

Promat Fire & Insulation Pte Ltd

Unit 605, 6th Floor, Tower B

Global Business Park

Mehrauli Gurgaon Road

Sector 26, Gurgaon

122002 Haryana

T +91 12 4434 6865

E info@promat-india.com

Italy

Etex Building Performance S.p.A.

Milanofiori, Strada 2, Palazzo C4

20057 Assago (MI)

T +39 02 99778611

E etexbp.italia@etexgroup.com

Japan

Promat Japan Corporation

Pacific Marks Shinjuku

4-15-7 Nishi-Shinjuku, Shinjuku-Ku

160-0023 Tokyo

T +81 3 3377 2821

F +81 3 3378 2821

E sales@promat.jp

Malaysia

Etex Malaysia Sdn Bhd

(Formerly known as Promat (Malaysia) Sdn. Bhd.)

Unit 19-02-01, Level 2, Wisma Tune

19 Lorong Dungun, Damansara

Heights

50490 Kuala Lumpur

T +60 3 2095 8555

E promat.my@etexgroup.com

Netherlands

Etex Building Performance B.V.

Oosterhorn 32-34,

9936HD Farmsum

T +31 30 241 0770

F +31 30 241 0771

E info@promat.nl

Peru

Promat Peru

Jr. Republica del Ecuador 448

15079 Cercado de Lima

T +51 619 6400

E contacto@promat.pe

Poland

Etex Poland Sp. z o.o.

Przeclawska 8

03-879 Warszawa

T +48 22 212 2280

F +48 22 212 2290

E top@promatop.pl

Romania

Etex Building Performance S.A.

Vulturilor Nr. 98, 5th Floor

030857 Bucharest

T +40 31 224 01 00

F +40 31 224 01 01

E promat.ro@etexgroup.com

Singapore

Promat Building System Pte Ltd

10 Science Park Road, #03-14 The

Alpha

Singapore Science Park II

117684 Singapore

T +65 6776 7635

E promat.sg@etexgroup.com

Slovenia

Promat d.o.o.

Kidričeva 56b

4220 Škofja Loka

T +386 4515 1451

F +386 4515 1450

E promat.si@etexgroup.com

South Korea

Promat International (Asia Pacific) Ltd (Korea Branch Office)

11F, Dong-a Building

117 Namdaemun-ro, Jung-gu

04522 Seoul

T +82 70 7794 8216

F +82 2 779 5566

E info@promat-ap.com

Spain

Promat Ibérica SA

C/Velazquez 47, planta 6ª izquierda

28001 Madrid

T +34 91 781 1550

F +34 91 575 1597

E info@promat.es

Switzerland

Promat AG

Industriestrasse 3

9542 Münchwilen

T +41 52 320 94 00

F +41 52 320 94 02

E office@promat.ch

UAE

Etex Middle East LLC

Plot no. 597-921

Dubai Investment Park 2

PO Box 123945, Dubai

T +971 4 885 3070

F +971 4 885 3588

E info@promatfp.ae

UK

Etex Building Performance Ltd

Gordano House

Marsh Lane, Easton-in-Gordano

BS20 ONE Bristol

T +44 (0)800 373 636

F +44 1275 379 037

E Sales: fpsales@etexbp.co.uk

Technical: technical.promat@etexbp.co.uk

USA

Promat Inc

1731 Fred Lawson Drive

TN 37801 Maryville

T +1 865 681 0155

F +1 865 681 0016

E sales@promat.us

Visit us at
www.promat.com

