

Promat



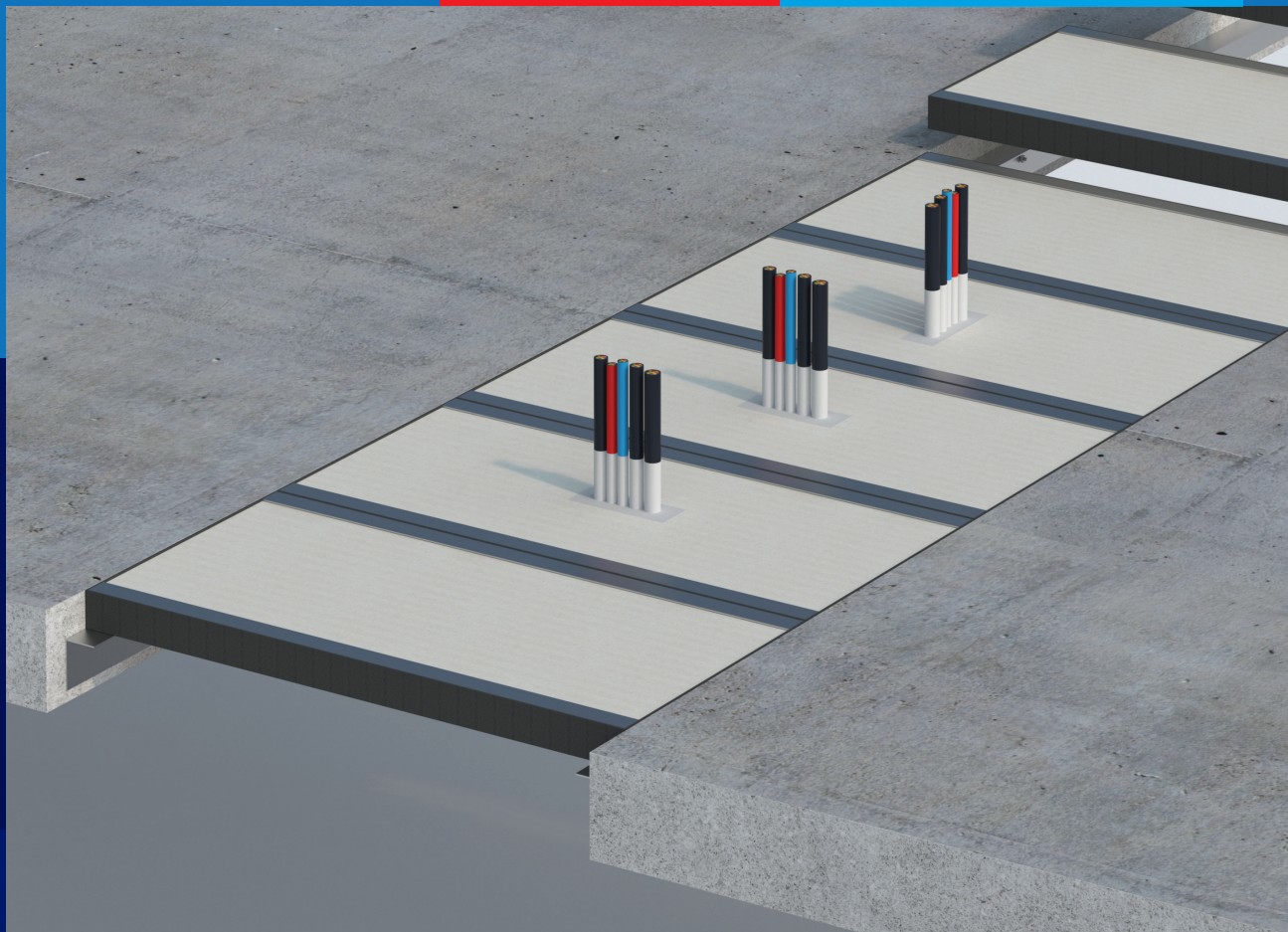
Compartmentation

PROMATECT[®]-H

Fire Barrier Panels

Retrievable, Accessible, Resealable, Trafficable, Fire Resistant
Penetration seal for large service openings

Technical manual



www.promat.com

etex inspiring ways
of living

Architectural Specification

PROMATECT®-H is a fire barrier panel designed specifically to address special fire stopping of large service openings and penetration seals that can be Retrievable, Accessible, Resealable and suitable for human trafficable during servicing. The perimeter of the individually retrievable PROMATECT®-H fire barrier panel is prelined with PROMASEAL® Intumescent strips that will intumesce during a fire and seal up all perimeter gaps & imperfection of fix. The panel is lightweight and can be conveniently cut with conventional tools to accommodate essential cables, services and duct penetration. Each panel can be retrieved from its sealed position to allow more cables or other penetrations to run. After cutting, the panel is placed back to its support system and resumes its fire stopping function. PROMATECT®-H fire barriers can be used in both horizontal and vertical orientation depending on site requirements.

PROMATECT®-H Fire Barrier Panel

The designer must determine the suitability of the design to the application and requirements before undertaking or constructing any works related to the specifications. If in doubt, the advice of a qualified engineer should first be obtained.



Fire Testing Methods

Fire resistance testing for Promat fire barrier panels is in accordance with British Standard BS476: Part 20. To better represent actual services in large service openings, pertinent principals of fire testing from EN 1366: 3 fire resistance tests for service installations and penetration seals are also adopted in the specimen construction. The test specimen is heated in the manner prescribed within the standard until the failure criteria have been reached. The time to reach the failure criteria are represented by performance measurements, referred to as Fire Resistance Levels (FRL):

1. Loadbearing Capacity (Stability)

Failure is deemed to have occurred when either:

- (a) collapse occurs, or
- (b) the deflection or rate of deflection occurs which is in excess of that specified in the standard and is applicable to the element under test.

Loadbearing capacity criteria is only applicable to load bearing elements. Nevertheless it is understood that the collapse of a non-loadbearing specimen constitutes an immediate failure.

2. Integrity

The ability of a specimen of a separating element to contain a fire to specified criteria free from collapse, holes, cracks or fissures and sustained flaming on the unexposed face.

3. Insulation

Failure is deemed to have occurred when either:

- (a) the average temperature on the unexposed face of the specimen increases by more than 140°C above the initial temperature, or
- (b) the temperature at any point on the unexposed face increases by more than 180°C above the initial temperature.

NOTE: All above specifications are correct at the time of printing of this handbook. Should there be any doubt, please consult Promat Technical Department.

PROMASEAL®-LFC

Fire protection seal



Material properties	
Colour	Anthracite grey
Appearance	Flexible seal
Density	1.15 ±0.20g/cm ³
Weight	2.0 mm thickness: 2.2 ±0.3kg/m ²
Expansion temperature	approx. 190°C
Expansion ratio	Minimum 1:15 (30 minutes, 550°C, loaded)
Expansion pressure	Minimum 0.4 N/mm ² (300°C)
Thorn flexibility	20mm (20°C)
Humidity resistance	Insoluble / hygroscopic (no effect on fire performance)
Reaction to fire	Class B2, normal combustible

Quality Assurance

Promat products are manufactured to stringent quality control systems to assure that our customers receive materials made to the highest standards.

Operating to these standards means that all activities, which have a bearing upon quality, are set out in written procedures.

Systematic and thorough checks are made on all materials and their usage. Test equipment is subjected to regular checks and is referred back to national standards.

The information given in this data sheet is based on actual tests and is believed to be typical of the product. No guarantee of results is implied however, since conditions of use are beyond our control.

General description

PROMASEAL®-LFC is a flexible, graphite based intumescent seal with a starting temperature of approx. 190°C.

Field of application

PROMASEAL®-LFC is an intumescent seal for door and window constructions as well as for frame backfill material.

System advantage / customer benefit

- Reduction of waste
- Resistant to humidity and atmospheric influences
- Free of organic solvents

Test certificate / approval

- Upon request

Additional test

- Thermal conductivity 0.238 W/(mK) (MPA Hannover)

Packaging

Product variations	LFCSK	Intumescent seal with self adhesive
	Foil	Standard
Thickness	1.2mm and 2.0mm including self adhesive foil (tolerances: 1.2mm: +0.2/-0mm; 2.0mm: ±0.18mm without protective liner)	
Coil dimensions	Width	10 to 200mm (tolerances width: +0.1/-0.5mm)
	Length	50m: up to 14mm width or 100m: over 15mm width (Carton core - diameter 150mm)
Packaging	In bulk on pallet	

Other product dimensions and variations on request!
Subject to change.

Storage requirements

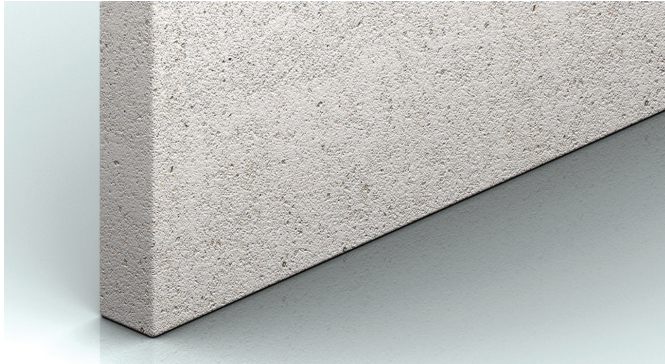
- Store in cool and dry conditions
- Protect from frost and heat
- Product variations with self adhesive foil are stockable up to 12 months

Safety instructions

- Please refer to the safety data sheet for additional advice

PROMATECT®-H

Fire protective construction board



Product description

PROMATECT®-H is a non-combustible calcium silicate board manufactured under Promat's proprietary Mineral Matrix Engineering Technology. It does not contain formaldehyde or any asbestos. The product is dimensionally stable and resistant to the effects of moisture. Its performance characteristics are not degraded by moisture. PROMATECT®-H has the following intended uses (according to EAD⁽¹⁾ 350142-00-1106): internal use (type Z2), internal use in high humidity conditions (type Z1) and external semi-exposed use (type Y). For fully exposed conditions, consult Promat Technical Department.

EAD⁽¹⁾: European Assessment Document

Manufacturing Certification

PROMATECT®-H is manufactured under a quality management system certified in accordance with ISO 9001:2015. The manufacturing site is also certified to meet the environmental standards of ISO 14001:2015 and the occupational health & safety requirements of ISO 45001:2018.

Fire Resistant Applications

- Structural steel fire protection
- Internal drywalls
- Internal lining to external walls
- Suspended and self-supporting hanger free ceilings
- Self-supporting airduct or cladding to steel sheet metal ducts
- Enclosures to E&M services
- Smoke screens
- Flame barrier
- Parapet & spandrel walls
- Upgrading fire performance of
 - Reinforced concrete
 - Masonry construction

Material properties

General description	Calcium Silicate board made with Mineral Matrix Engineering technology
Surface condition & appearance	Off-white colour Front face: smooth Back face: sanded
Nominal dry density (average)	Approx. 975kg/m ³
Moisture Content	Approx. 6.0% The moisture content varies and will reach an equilibrium over time with the atmospheric relative humidity of the environment
Alkalinity	pH 12
Thickness tolerance	Compliant with thickness tolerance of CE requirements (9mm thick standard sheets, +/-0.5mm)
Dimension tolerance	±5mm (standard board dimensions)

Static Values

Modulus of Elasticity E	Flexural Strength F	Tensile strength T	Compressive strength \perp
Longitudinal: 4.1kN/mm ² Transverse: 4.0kN/mm ²	Longitudinal: 10N/mm ² Transverse: 7N/mm ²	Longitudinal: 4.11N/mm ² Transverse: 2.15N/mm ²	9.3N/mm ²

Reaction to Fire & Thermal Properties

Combustibility	Surface burning	Thermal conductivity
A1 Classification: EN 13501-1 Non-combustible: BS 476: Part 4	Class O: BS 476: Part 6 & 7	0.242W/m ² K

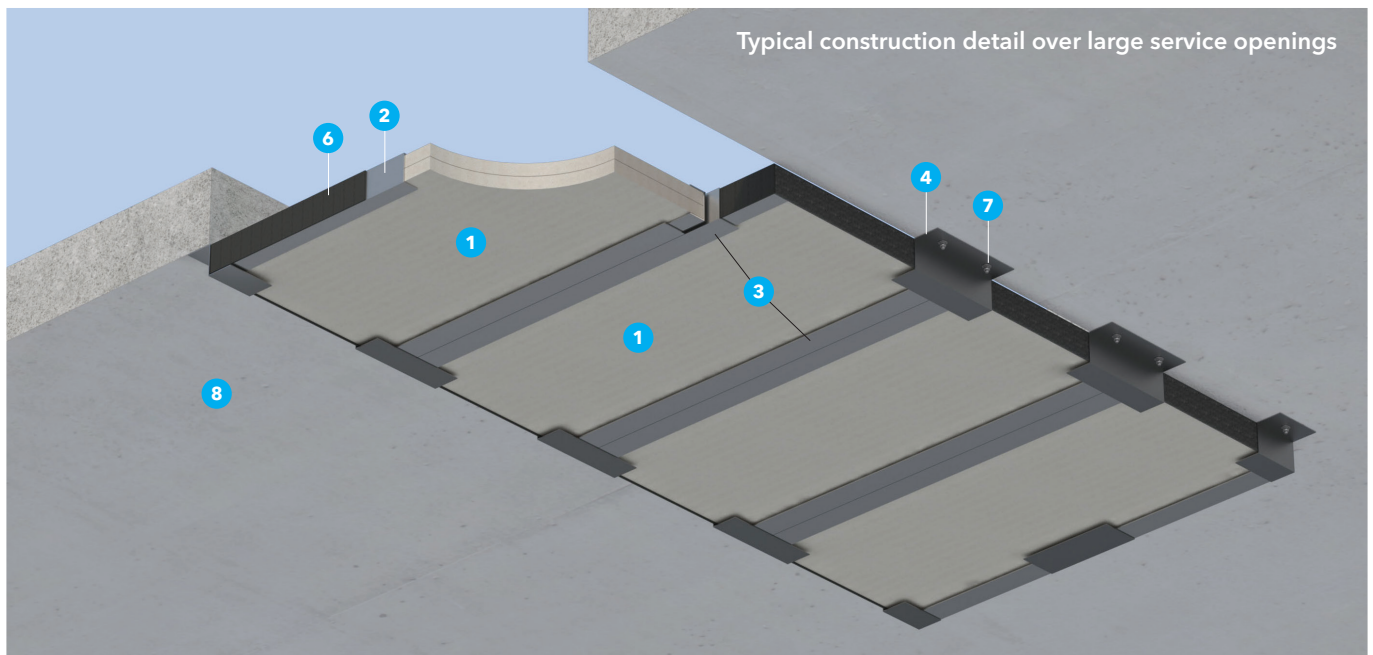
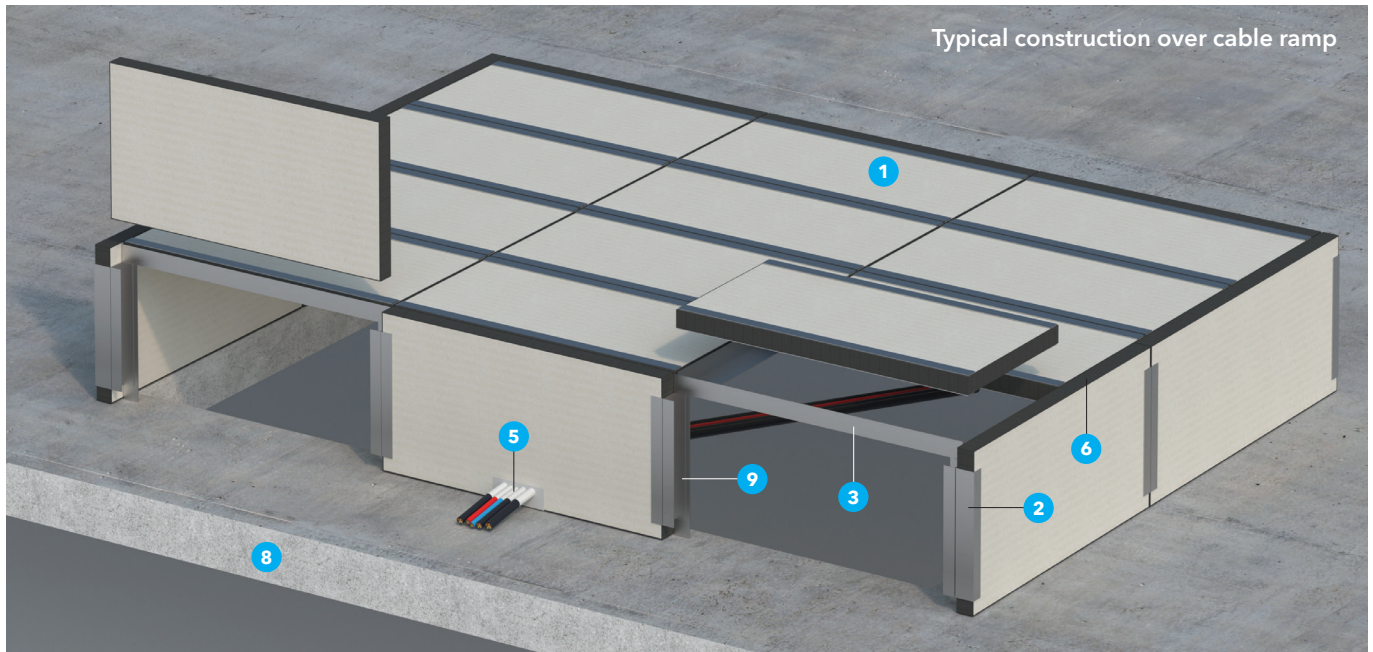
PROMATECT[®]-H

Fire protective construction board

Standard thickness	Standard dimension	Number of boards per pallet	Surface area per pallet	Weight of standard sheet	Weight per pallet
9mm	2440mm x 1220mm	61	181.5m ²	Approx. 29kg	Approx. 1,888kg
12mm	2440mm x 1220mm	46	136.9m ²	Approx. 39kg	Approx. 1,896kg
15mm	2440mm x 1220mm	36	107.3m ²	Approx. 49kg	Approx. 1,858kg
20mm	2440mm x 1220mm	27	80.4m ²	Approx. 65kg	Approx. 1,859kg
25mm	2440mm x 1220mm	22	65.4m ²	Approx. 82kg	Approx. 1,890kg

All physical and mechanical values are averages based on standard production and tested according to internal procedures. The typical values are given for guidance. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please consult Promat Technical Department.

PROMATECT®H Fire Barrier Panel - Over Cable Ramp



1. PROMATECT®-H Fire Barrier Panel.
Comprising PROMATECT®-H boards, perimeter seal with PROMASEAL® Intumescent Strip.
FRL -/60/60: Two layers of 20mm + 15mm thick
FRL -/120/120: Two layers of 25mm + 25mm thick

Typical cable ramp construction:

2. Longitudinal channel capping support
FRL -/60/60: U-35mm x 35mm x 1.5mm
FRL -/120/120: U-50mm x 50mm x 1.5mm
3. Intermediate back to back steel angles support
FRL -/60/60: L-50mm x 30mm x 1.5mm
FRL -/120/120: L-50mm x 50mm x 1.5mm
4. Z-Section steel supports
FRL -/60/60: Z-50mm x 35mm x 50mm x 1.5mm
FRL -/120/120: Z-50mm x 50mm x 50mm x 1.5mm
5. Cables penetration through PROMATECT®-H panel, gaps sealed with suitable proprietary fire stopping system.
a) Gaps 5mm wide sealed with PROMASEAL®-A.
b) Gaps up to 10mm wide sealed with PROMASEAL®-A and/or PROMASEAL® Bulkhead sealer.
6. PROMASEAL® Intumescent strip 2-3mm thick laminated all round the panel.
7. M10 anchor bolts.
8. Concrete ramp and slab.
9. Structural supporting framework as per Engineer's design.

Promat

Australia

Promat Australia Pty Ltd

South Australia office

1 Scotland Road
SA 5031 Mile End South
☎ 1800 Promat (776 628)
☎ +61 8 8352 1014
✉ PAPT.mail@etexgroup.com

New South Wales office

Unit 1, 175 Briens Road
Northmead, NSW 2152
☎ 1800 Promat (776 628)
☎ +61 2 9630 0258
✉ PAPT.mail@etexgroup.com

Victoria office

Suite 205, 198 Harbour Esplanade
Docklands, VIC 3008
☎ 1800 Promat (776 628)
☎ 1800 334 598
✉ PAPT.mail@etexgroup.com

Queensland office

433 Logan Road
Stones Corner, QLD 4120
☎ 1800 011 376
☎ 1800 334 598
✉ PAPT.mail@etexgroup.com

China

Promat Shanghai Ltd

No.2, Tai Hua Street
Yonghe Economic District
Guangzhou City
Guangdong Province 511356
☎ +86 20 8136 1167
✉ promat.cn@etexgroup.com

Hong Kong

Promat International (Asia Pacific) Ltd

Room 1010, C.C. Wu Building
302-308 Hennessy Road
Wanchai
☎ +852 2836 3692
✉ promat.hk@etexgroup.com

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
☎ +60 3 2095 8555
✉ promat.my@etexgroup.com

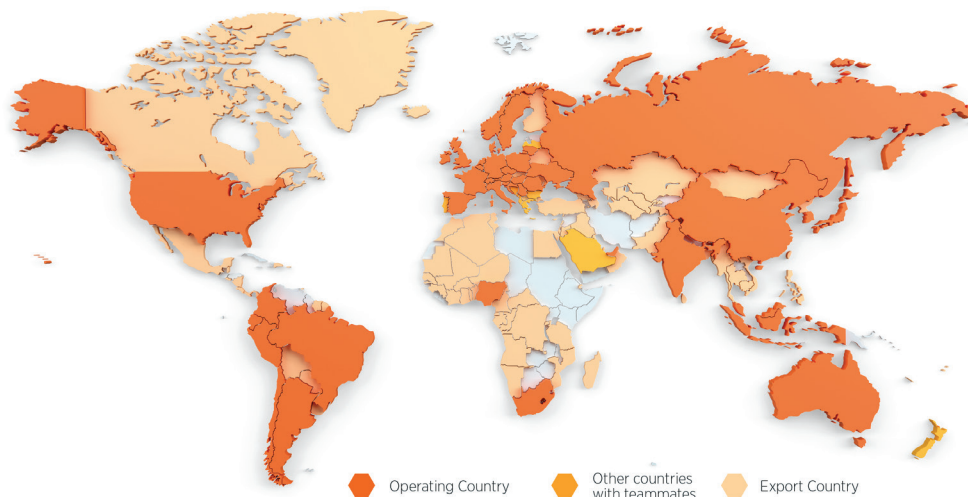
Singapore

Promat Building System Pte Ltd

10 Science Park Road, #03-14 The Alpha
Singapore Science Park II
117684 Singapore
☎ +65 6776 7635
✉ promat.sg@etexgroup.com

www.promat.com

- The technical data provided in this publication is based on mean values prevalent at time of publication and is thus subject to fluctuation. It should not be regarded as a guarantee to system performance.
- All data contained herein conforms to and frequently surpasses generally accepted fire protection standards recognised by most professional fire science practitioners and regulatory authorities worldwide. The same general principle is equally applicable to all Promat products and systems. Promat has access to a considerable body of test authentication data and this can be provided on a complimentary basis upon request. It should be noted however that this publication replaces all previous editions in its entirety.
- This document is protected by International copyright laws. Reproduction and distribution in whole or in part without prior written permission is strictly prohibited. PROMAT, PROMATECT, PROMASEAL and logo are registered trademark of Etex NV or an affiliate thereof in Singapore and/or other countries. Any use without authorisation is prohibited and may violate trademark laws.



About Etex

Etex is an international building materials specialist; the company wants to inspire people around the world to build living spaces that are ever more safe, sustainable, smart and beautiful. Founded since 1905 and headquartered in Belgium, Etex currently operates in 110 production sites in 42 countries with over 11,000 employees globally.

Etex fosters a collaborative and caring culture, a pioneering spirit and a passion to always do better for its customers. Building on its experience and global market needs, the company strives to improve its customers quality of living with ever more effective lightweight solutions.

Its three R&D centres support four global sales divisions:

- Building Performance: Leader in plasterboards and fibre cement boards, and the global reference in passive fire protection solutions for the residential and commercial segments.
- Exteriors: Provider of innovative, durable, high performance and beautiful fibre cement exterior materials for architectural, residential and agricultural projects.
- Industry: Front runner of engineering expertise to drive the future of high performance thermal and acoustic insulation as well as passive fire protection in the industrial, aerospace and energy sectors.
- New Ways: As a new division created in January 2020, New Ways offers high-tech offsite modular solutions based on wood and steel framing.

Etex is Inspiring Ways of Living, for more information, please visit our website: www.etexgroup.com