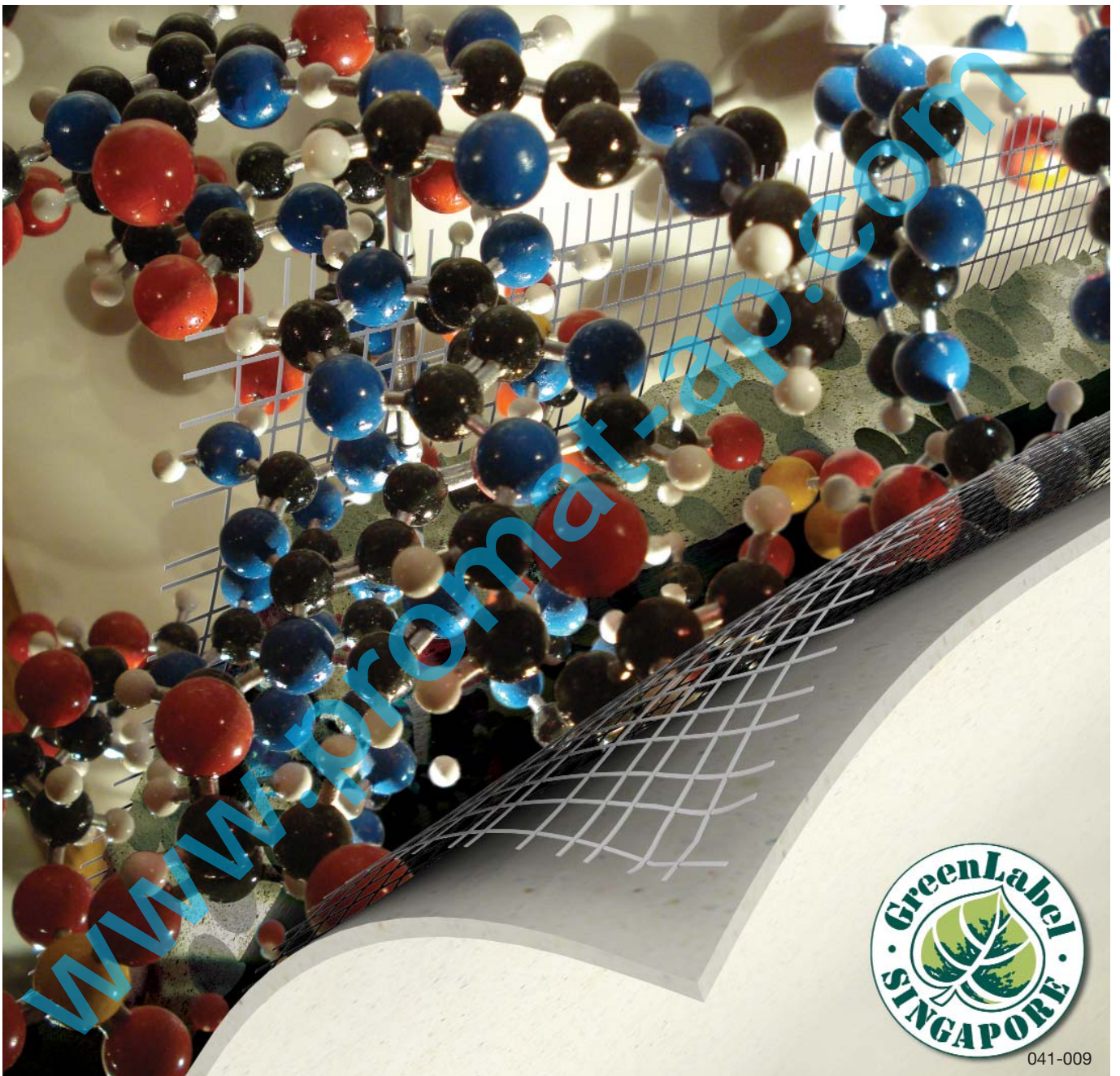


Promat



PROMATECT® 50 Fire Resistant Compartmentation Systems



041-009

General Description

PROMATECT® 50 is Promat's newest matrix technology of binding organic materials and inorganic minerals within a calculated mineral matrix to form a monolithic core. Known as PromaX® technology Cement Bound Matrix board, this low energy environmentally friendly manufacturing process makes an excellent board that offers not only superior fire resistance but also exemplary physical strength, robustness and performance.

PROMATECT® 50 is off-white in colour. One face is extremely smooth and ready to form a finished surface able to receive almost any form of architectural/finish treatment. The reverse face has a (visible) fibre mesh reinforcement.

PROMATECT® 50 is resistant to the effects of moisture and will not physically deteriorate when used in damp or humid conditions. Performance characteristics are not degraded by moisture. A fully saturated PROMATECT® 50 retains up to 95% of its physical strength.

A health and safety data sheet is available from the Promat Technical Department and, as with any other materials should be read before working with the board. The board is not classified as a dangerous substance so no special provisions are required regarding the transportation and the disposal of the product to landfill. They can be placed in on-site rubbish skips with other general building waste which should then be disposed of by a registered contractor in the appropriate and approved manner.



Typical Mechanical Properties

Flexural strength, $F_{rupture}$ (EN 12467: 2000)	Longitudinal Transverse	N/mm ² N/mm ²	13.76 10.80
Tensile strength, $T_{rupture}$ (EN 12467: 2000)		N/mm ²	4.2
Compressive strength (average, perpendicular on board face) (BS 5669: Part 1: 1989)		N/mm ²	13.1

Applications

- Ceilings
- Partitions
- E&M services enclosures
- Wet and dry riser pipes enclosures

General Technical Data

Product generic description	PromaX® technology Cement Bound Matrix board	
Material class (BS 476: Part 4: 1970)	Non combustible	
Surface spread of flame (BS 476: Part 7: 1997)	Class 1	
Surface spread of flame for bare floors (AS ISO 9239: Part 1: 2003)	No ignition	
Building regulations classification	Class 0	
Heat and smoke release rates (AS/NZS 3837)	Group 1	
Fire propagation of product (BS 476: Part 6: 1989)	$I = 0$; $i_1 = 0$; $i_2 = 0$; $i_3 = 0$	
Simultaneous determination of ignitability, flame propagation, heat and smoke release (AS1530: Part 3: 1999)	Indices 0/0/0/0-1	
Density (EN 12467: 2000)	kg/m ³	1200 (± 10% tolerance)
Thermal conductivity (approximate) at 20°C (ASTM C518: 1991)	W/m ² K	0.193
Typical moisture content, ambient to dry condition (BS 5669: Part 1: 1989, Clause 9)	2.4%	
Emission test (to ASTM D5116-90 for Green Label Singapore)	Within limits set out by the Singapore Environment Council	
Thickness tolerance of standard boards	mm	± 0.5
Length x width tolerance of standard boards	mm	+ 5
Surface condition	Front face: smooth fair face Back face: smooth with fibre mesh reinforcement	
Thickness (mm)	Standard dimensions* (mm x mm)	Weight per m ² of sheet (approximate kg/m ²)
7	2440 x 1220	8.4
9	2440 x 1220	10.8
12	2440 x 1220	14.4
15	2440 x 1220	18.0
18	2440 x 1220	21.6
20	2440 x 1220	24.0
25	2440 x 1220	30.0

*Other sizes are available upon request.

The properties in above tables are mean values given for information and guidance only. If certain properties are critical for a particular application, it is advisable to consult your nearest Promat Technical Department. PROMATECT® 50 PromaX® technology Cement Bound Matrix board is manufactured under a quality management system certified in accordance with ISO9001: 2000 Certification. For further technical information, please consult Promat.

GENERAL NOTE: AS FOR ALL NATURAL MATERIALS SUCH AS CONCRETE AND CLAY QUARTZ CAN BE PRESENT, THIS PRODUCT MAY ALSO RELEASE DUST CONTAINING QUARTZ PARTICLES WHEN IT IS MECHANICALLY MACHINED (CUTTING, SANDING, DRILLING). INHALATION OF HIGH CONCENTRATIONS OF DUST CAN IRRITATE THE RESPIRATORY SYSTEM. DUST CAN ALSO IRRITATE THE EYES AND/OR THE SKIN. THE INHALATION OF QUARTZ CONTAINING DUST, IN PARTICULAR HIGH CONCENTRATION OF FINE (RESPIRABLE) DUST OR OVER A PROLONGED PERIOD OF TIME CAN LEAD TO LUNG DISEASE (SILICOSIS) AND AN INCREASED RISK OF LUNG CANCER. AVOID THE INHALATION OF DUST BY USING MACHINERY WITH DUST EXTRACTION. GUARANTEE ADEQUATE VENTILATION ON THE WORK FLOOR. AVOID CONTACT WITH THE EYES AND SKIN AND AVOID INHALATION OF THE DUST BY WEARING APPROPRIATE PERSONAL PROTECTION GEAR (SAFETY GOGGLES, PROTECTIVE CLOTHING AND DUST MASK). FOR MORE INFORMATION PLEASE CHECK THE MATERIAL SAFETY DATA SHEET, AVAILABLE UPON REQUEST.

Fire attack from either side / Non loadbearing

	Fire Rating	FRL	-/60/60
		STANDARD	BS476: Part 22: 1987 AS1530: Part 4
	Acoustic	STC R _w	See Acoustic Table below
		STANDARD	ISO140: Part 3: 1996 ISO717: Part 1: 1996
Construction		PREDICTED ASSESSMENT	Marshall Day 27th March 2009
		MAXIMUM HEIGHT	4000mm (Please consult Promat for walls above 4000mm in height)
		MAXIMUM LENGTH	Unlimited
		PARTITION THICKNESS	75mm
		PARTITION MASS	14.24kg/m ²

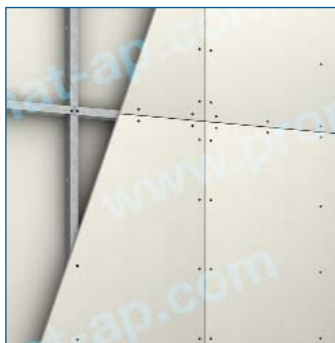
TECHNICAL DATA

- 1 layer of PROMATECT® 50 board 12mm thick at each side of wall
- Steel studs 64mm x 35mm x 0.5mm at nominal 610mm centres. For heights above 4000mm, please consult Promat.
- Top and bottom tracks 64mm x 0.5mm fixed to substrate using 40mm x M6 masonry anchors at 500mm centres
- PROMASEAL® AN Acrylic Sealant, required only where gaps between board and substrate occur.
- 25mm x No.8 self-tapping screws at maximum 200mm centres

Vertical sheeting
(walls up to 2440mm high)



Vertical sheeting
(walls above 3000mm high)



Horizontal sheeting
with strip joint



Horizontal sheeting
with channel joint

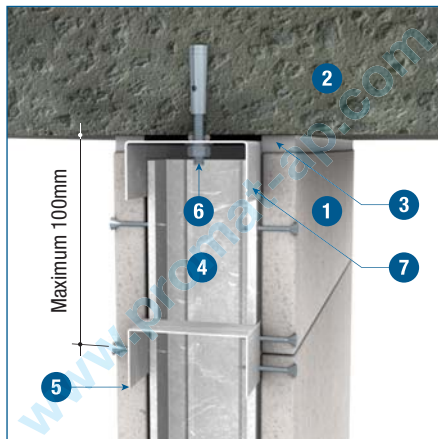


Acoustic Table

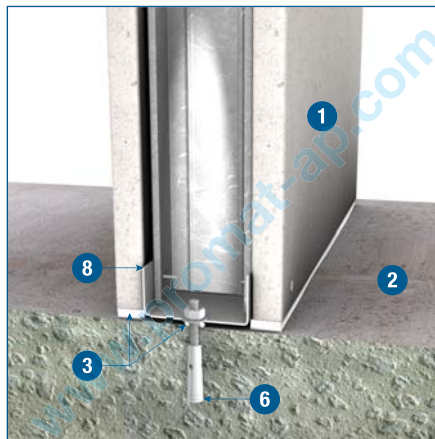
Board thickness (both sides of lining with stud 64mm depth)	12mm
Cavity infill	# STC / R _w (C _i)
a) Nil	39/39dB (-7)
b) 50mm thick x 60kg/m ³ stone wool	45/46dB (-12)
c) 90mm thick Tontine TSB5	45/46dB (-12)

NOTE: Above values are predicted figures. # Margin of error is generally within ±3dB.

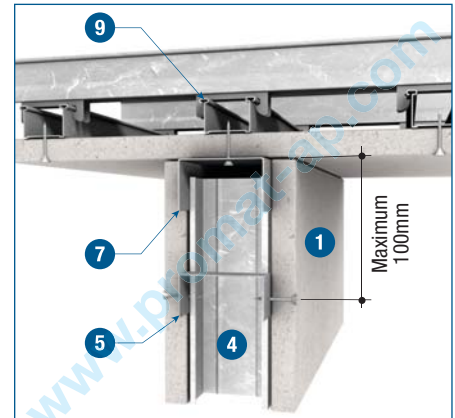
Wall/ceiling junction for high wall



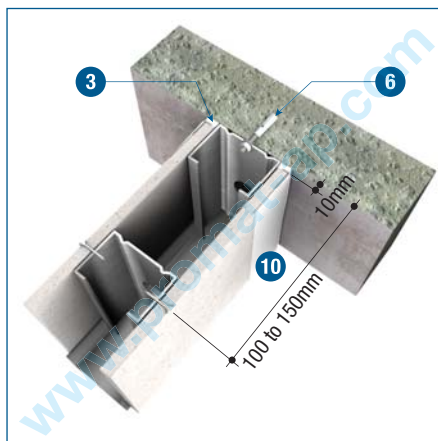
Wall base fixing



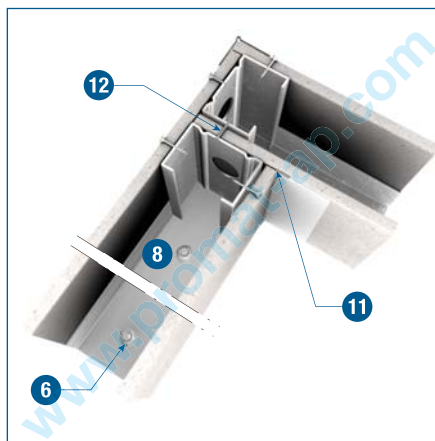
Wall/ceiling junction with fire resistant suspended ceiling



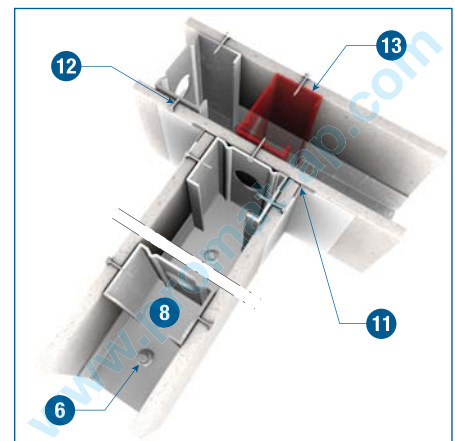
Steel stud frame to masonry wall



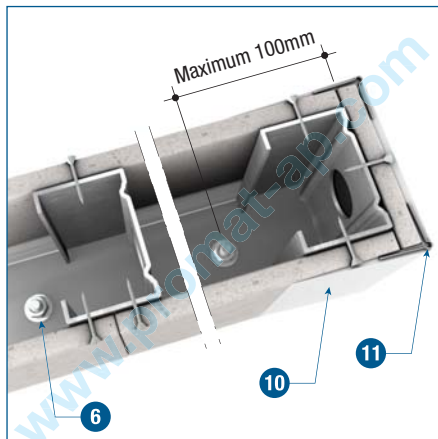
Corner detail



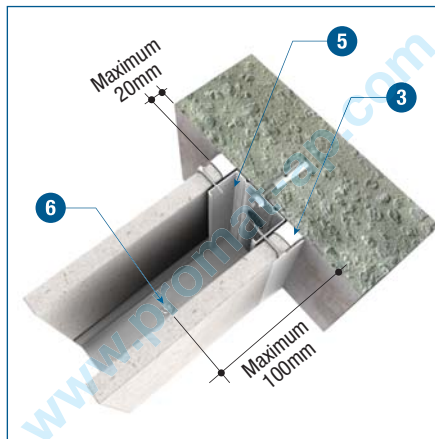
Wall to wall T-junction detail



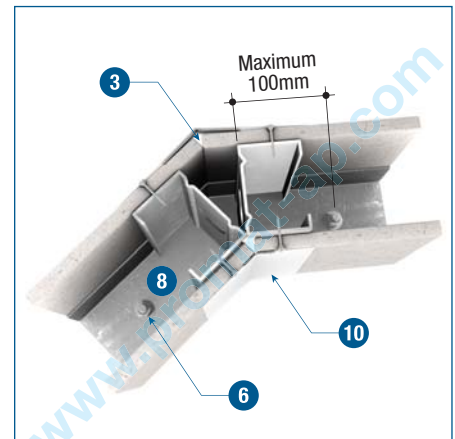
End cap for door or window opening



Wall movement joint detail



Wall angled junction



TECHNICAL DATA

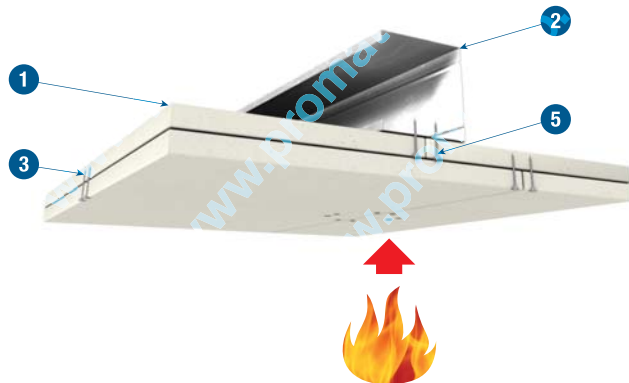
Please consult Promat for applicable system, FRL and amendments where seismic loads are expected.

- 1 PROMATECT® 50 board
- 2 Substrate with a fire resistance at least equivalent to that of the partition
- 3 PROMASEAL® AN Acrylic Sealant to achieve stated fire and/or acoustic performance
- 4 Track section with flange fastened to soffit at maximum 500mm centres
- 5 Horizontal nogging track
- 6 40mm x M6 expansion bolts at minimum 500mm centres
- 7 Top track

- 8 Bottom track
- 9 Secondary profile where wall runs parallel to setout
- 10 Flush joints
- 11 Set corner with tape and jointing compound
- 12 Screw studs together at maximum 500mm vertical centres
- 13 Additional stud at wall intersection

NOTE: Junction may be finished square, with stopping bead or with cornice. Do not rigidly fix cornice to walls where movement joints are used.

Fire attack from below / Non loadbearing

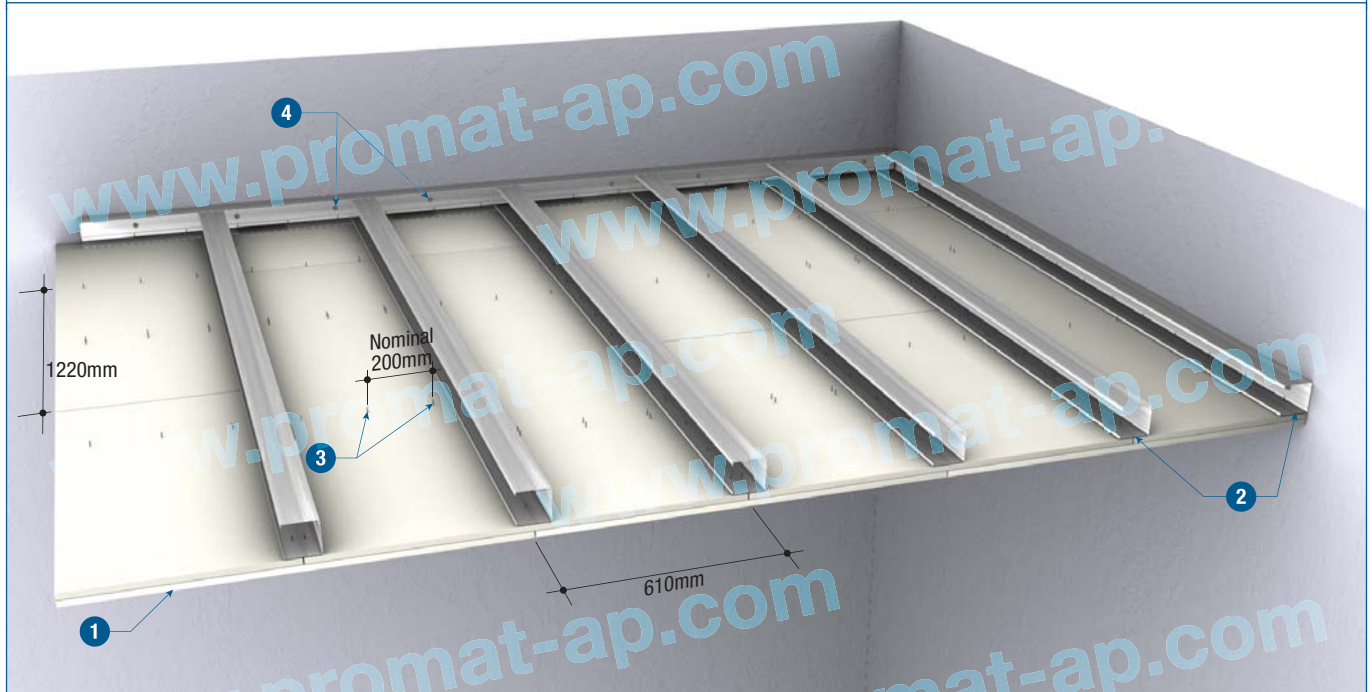


Fire Rating

FRL	-/30/30
STANDARD	BS476: Part 22: 1987 AS1530: Part 4

Construction

CEILING THICKNESS	From 124mm
CEILING MASS	From 28.8kg/m ²



TECHNICAL DATA

- 2 layers of PROMATECT® 50 board 12mm thick each
- Steel channel 100mm x 100mm x 1.2mm thick at nominal 610mm centres for 3000mm span
- 38mm stitching screws at nominal 200mm centres at all joints, not coincident with steel frame.
- 40mm x M10 masonry anchors at 500mm centres
- First layer fixed with 32mm self-drilling, self-tapping screws into steel frame at nominal 200mm centres.
Second layer fixed with 45mm self-drilling, self-tapping screws into steel frame at nominal 200 centres.

See page 7 for perimeter details and control joints.

Steel joist type – Fire attack from below / Loadbearing



Fire Rating	FRL	60/60/60
	STANDARD	BS476: Part 21: 1987 AS1530: Part 4
	LOADING	1.5kN
Construction	CEILING THICKNESS	235mm
	CEILING MASS	From 36kg/m²

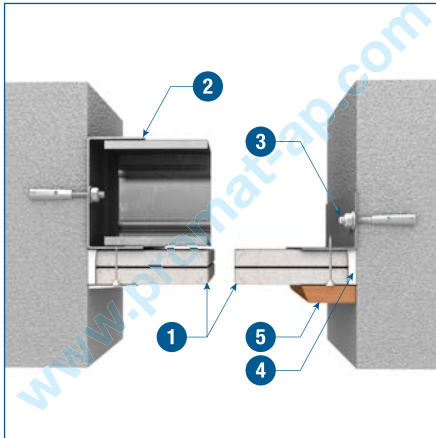


TECHNICAL DATA

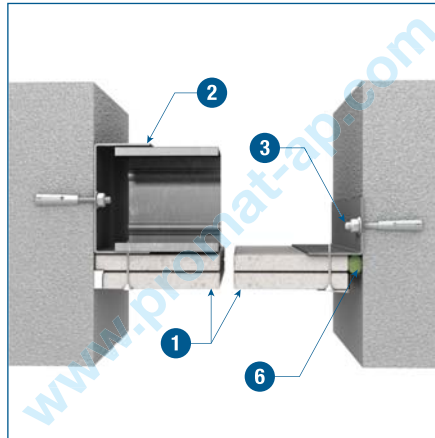
- 1 1 layer of PROMATECT® 50 board 15mm thick
- 2 1 layer of PROMATECT® 50 cover strip 100mm wide x 20mm thick located behind transverse board joint
- 3 Board joint to coincide with steel framework
- 4 Gap at perimeter to be caulked with PROMASEAL® AN Acrylic Sealant
- 5 Steel joist channel 200mm x 65mm x 15mm x 1.5mm thick at 610mm centres
- 6 Particle board flooring 20mm thick
- 7 32mm x No.8 steel screws at nominal 200mm centres into steel joists

Please refer to opposite page for perimeter and control joints details.

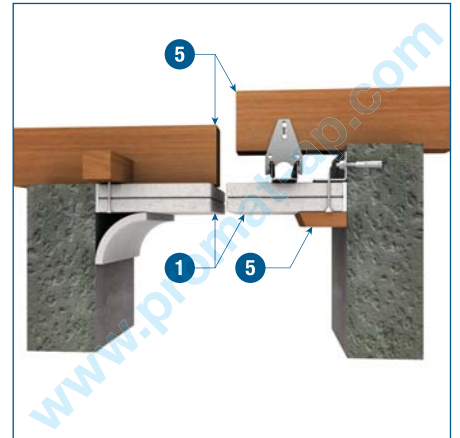
Ceiling perimeter to wall intersection (1)



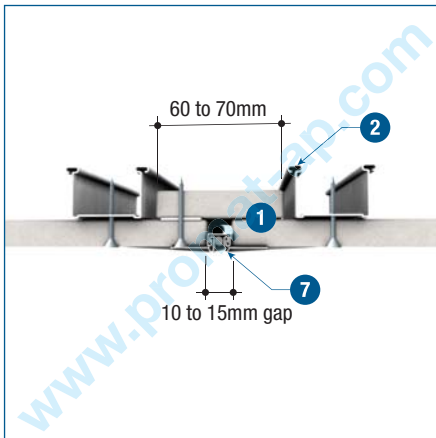
Ceiling perimeter to wall intersection (2)



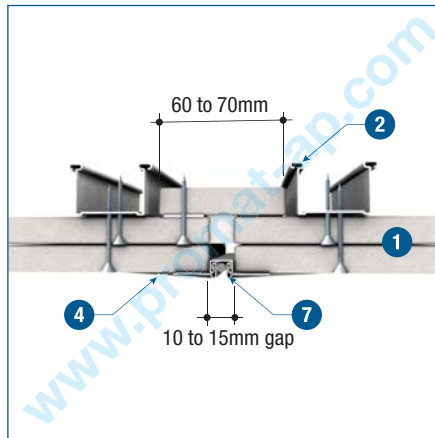
Ceiling perimeter to wall intersection (3)



Parallel to steel framing (single layer)



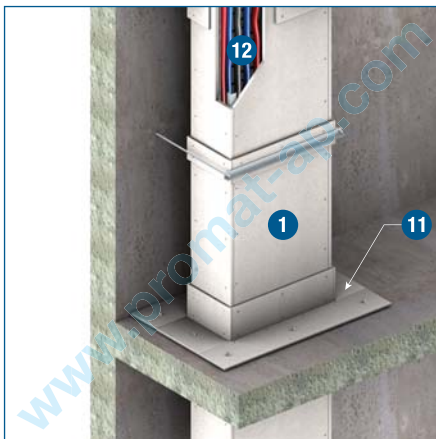
Parallel to steel framing (double layer)



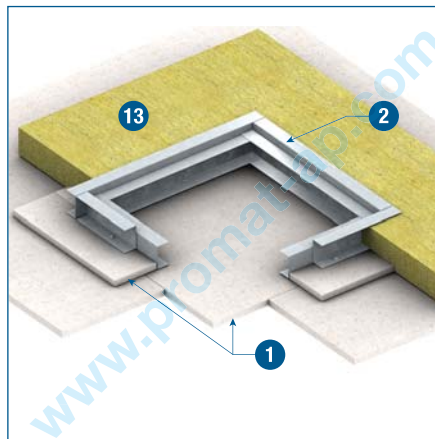
Floor tiling



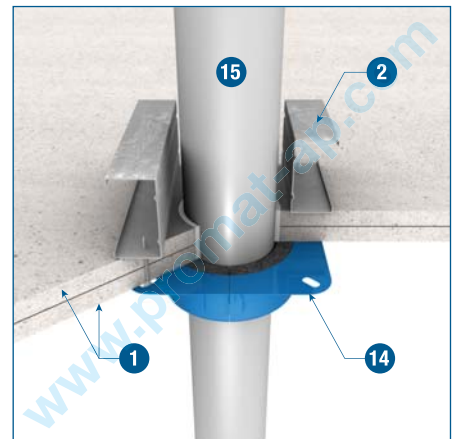
Vertical services enclosure



Access panel



Fire collar for plastic pipes



TECHNICAL DATA

See pages 5 and 6 for applicable system and FRL.

- 1 PROMATECT® 50 board
- 2 Galvanised steel channel
- 3 50mm x M6 expansion bolts at 500mm centres
- 4 PROMASEAL® AN Acrylic Sealant to achieve stated fire and/or acoustic performance
- 5 Timber joists
- 6 PROMASEAL® IBS™ of Ø 22mm diameter to maintain the fire performance (not suitable where acoustic integrity is required)
- 7 RONDO P35 control joint with set finish

- 8 Ceramic floor tiles with tile grout in between joints and tile adhesive underneath
- 9 Waterproof angle fillet
- 10 Waterproofing fibre mesh
- 11 PROMATECT® 50 collar
- 12 E&M services, cable tray etc.
- 13 Mineral wool
- 14 PROMASEAL® FC Retrofit Collar or PROMASTOP® UniCollar®
- 15 Plastic piping, e.g. HDPE, uPVC etc.

Please consult Promat Technical Department for more details.

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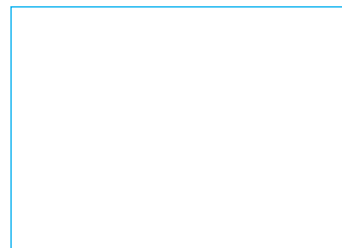
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