Promat

Promat SYSTEMPANEL™ Quick Solutions for Fire Resistant Party Walls, Ceilings and Floors

For Promat Asia Pacific Organisation • August 2014

Promat SYSTEMPANEL™ is the latest development in fire resistance board systems from Promat® the leader in innovation for passive fire protection products and systems

Promat Australia is part of a global research, development and manufacturing company focussing solely in the area of passive fire and acoustic systems and was founded some 30 years ago. Our parent company, The Etex Group, employs over 13,000 staff worldwide. Promat Australia brings added global experience to the industry and continues to support Australian made exports of product to South East Asia, Europe and America through the Promat companies in those regions.

Promat is an acknowledged leader in the field of passive fire protection and high performance insulation. As a market-driven solution provider, Promat's products and systems are used for passive fire protection of buildings, industrial facilities, tunnels, infrastructure, marine applications and development of best performance insulation solutions for high and low temperatures, acoustic, impact and humidity resistance needs.

Promat supply by far the widest range of passive fire protection and fire-resistant products and systems in Australia, including PROMATECT® boards, CAFCO® and PROMASPRAY® vermiculite sprays and intumescent coating systems and PROMASEAL® fire collars, sleeves, sealant, pillows, mortar, backing rods, and other specialised fire stopping systems.

Promat's products and systems are designed and tested in accordance with Australian and International standards and are installed by approved, trained and certified applicators. This ensures that only the highest quality products are made available to the market with minimal impact to the environment. Ongoing training programs are also available and encouraged to ensure all products are correctly applied and installed.

Recently, Promat have been primary suppliers for a number of major projects such as;

Brisbane: Legacy Way Tunnel, Millenium Arts Centre, Brisbane Square, the Brisbane International Terminal Extension, INB5, INB3 & INB1, Harrogate Tunnel, The new Airport link tunnel and the Gold Coast Casino development.

Adelaide: SAHMRI, New Royal Adelaide Hospital, Adelaide Oval, Australian Submarine Corporation, Adelaide University and the Desalination Plant.

Melbourne: Royal Children's Hospital, Southern Cross Station, Eureka Tower, ANZ - Docklands, Myer Centre - City and Mornington on Tanti.

Sydney: Barangaroo, Macquarie Bank - King St wharf and Westfield's Centrepoint.

Perth: Fionna Stanley Hospital, Perth Arena and Burswood Casino.

Darwin: Darwin Convention & Exhibition Centre.

Promat's products are strongly supported by our extensive technical knowledge and experience in the fire protection industry from Promat's headquarters and manufacturing facility in Adelaide, as well as our sales and distribution centres in Sydney, Melbourne, Brisbane, Perth, Darwin and New Zealand. The Company is service driven and derives its great strength by providing solutions to all types of passive fire problems encountered during construction of Commercial, HealthCare, Industrial and Special Purpose buildings by servicing Architects, Engineers, Councils, Consultants, Builders and its valued installation contractor customers.

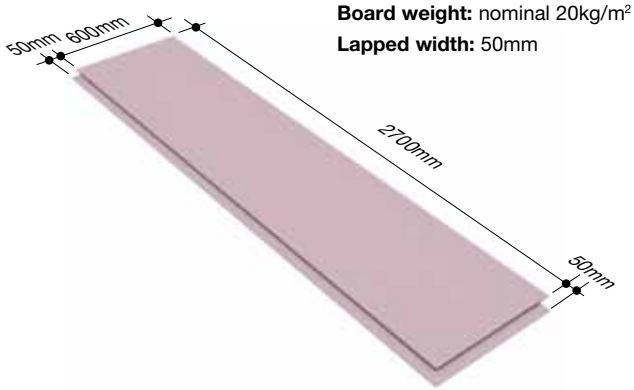
Promat SYSTEMPANEL™
Fire Resistance Flooring; Wall and Ceiling System

Promat SYSTEMPANEL™ is composed of Cement Bound Matrix (CBM) boards that are silicate and asbestos free with a 50mm overlapping system on all four edges to allow modular continuity and excellent sealing at all joints.

Promat SYSTEMPANEL™ is pink in colour with one smooth face which can be left unfinished in many applications and the reverse face has a (visible) fibre mesh reinforcement. Should the smooth face require finishing for aesthetic reasons then standard flushing compounds as used in dry wall construction may be used. For an architectural finish a skim coat will be required.

Promat SYSTEMPANEL™ is an innovative new lightweight panel system which is economical, easy and fast to install. Promat SYSTEMPANEL™ is manufactured to meet environmental standards.

Promat SYSTEMPANEL™



Board weight: nominal 20kg/m²
Lapped width: 50mm

General Description

Promat SYSTEMPANEL™ is Promat's newest matrix technology of binding organic materials and inorganic minerals within a calculated mineral matrix to form a monolithic core. Producing Cement Bound Matrix is very economical on energy. It does not require high temperatures for curing or drying. In addition, at least 25% of the composition is recycled waste. This is truly an environmentally friendly board leaving little carbon footprints, and does not emit or produce green house gases.

Promat SYSTEMPANEL™ 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 age or moisture.

It is recommended that panels are stored flat and in dry conditions and protected from water once installed. However if panels get wet or saturated they must be handled with care and allowed to dry out before being fully enclosed.

A health and safety data sheet is available from the Promat 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 by a registered contractor in the appropriate and approved manner.

Compliance with the building code

These systems can be used for Class 1, 2 and 3 buildings. However, the suitability of use of lightweight construction in your project should be confirmed with the authority having jurisdiction before being installed.

Features & Benefits

- Rot resistant
- Termite resistant
- Heavy duty
- High flexural strength
- High tensile strength
- Excellent durability
- Lightweight
- Lapped joint fixing board to board
- Time saving installation
- Good thermal insulation
- Acoustic insulation values in accordance with the BCA
- Non combustible in accordance with EN/ISO 1182:2002
- Asbestos free and non hazardous
- Fire resistance approvals to AS 1530: Part 4 standard

Typical Mechanical Properties

Flexural strength, $F_{rupture}$ (BS EN 310: 1993)	Longitudinal N/mm² Transverse N/mm²	12.00 10.00
Tensile strength, $T_{rupture}$ (BS5669: Part 1: 1989)	Longitudinal N/mm² Transverse N/mm²	4.50
Compressive strength (average, perpendicular on board face) (BS 5669: Part 1: 1989)	N/mm²	11.00

General Technical Properties

Product generic description		Promax® technology Cement Bound Matrix board
Non Combustible		EN ISO 1182: 2002 BS 476: Part 4: 1970
Heat and smoke release rates (tested to AS/NZS 3837)		Group 1
Spread of flame for bare floors (tested to AS ISO 9239: Part 1)		No ignition
Thermal conductivity (approximate) at 20°C	W/m°K	0.166
Simultaneous determination of ignitability, flame propagation, heat and smoke release (tested to AS 1530: Part 3)		Determination of ignitability: 0 Determination of flame propagation: 0 Determination of heat release: 0 Determination of smoke developed: 0-1
Water permeability (tested to AS 2908: Part 2: 2000)		Passed
Water proof (tested to AS 3740: 2004 using wet area membrane)		Impermeable to water
Water Tightness to BS 4624: 1981		Passed
Alkalinity (approximate)	pH	9 - 10
Uniformly Distributed Loads (in accordance with AS/NZS 1170: Part 1 up to 20kPa)		Passed

Continued on next page

General Technical Properties *Continued from previous page*

115mm Diameter Load Applicator (kN)		
SYSTEM TESTED	Joist Centres (mm)	
	450	600
60min SYSTEMPANEL™	5.75	5.61
90 min SYSTEMPANEL™	9.64	8.07
120min SYSTEMPANEL™	9.50	8.68
350mm² Diameter Load Applicator (Punch) (kN)		
SYSTEM TESTED	Joist Centres (mm)	
	450	600
60min SYSTEMPANEL™	2.40	2.23
90 min SYSTEMPANEL™	3.51	2.77
120min SYSTEMPANEL™	3.04	3.36
Mildew Growth (no visible growth of Mildew in accordance with HN 0028)		Passed
Acoustic (One hour fire resistant floor system) Airborne Impact		R_w +Ctr 52 LnW + Ci 56 Complying with most residential requirements.
Density (tested to BS 5669: Part 1: 1989, Clause 8)	kg/m³	Nominal 1100
Emission test (to ASTM D5116-90 for Green Label Singapore)		Within limits set out by the Singapore Environment Council
Steel and timber joists centres		450mm / 600mm centres
Thickness tolerance of standard boards	mm	± 1.0 for board thickness > 15
Length x width tolerance of standard boards	mm	± 2
Surface condition		Smooth and fair face on one side

NOTE 1: Standards and codes may determine that higher loads may need to be considered. A registered structural engineer should be consulted in these instances.
NOTE 2: These tests satisfy the requirements for ultimate limit states.
NOTE 3: If a butt joint does not land on a joist, it shall be supported with a noggin of the same material as the main supports.
NOTE 4: Promat SYSTEMPANEL™ is not a finished product and should always have a floor covering applied to stop mechanical damage and an approved waterproofing system if used in areas where water is present.

Thickness (mm)	Standard dimensions* (mm x mm)	Module dimension (mm x mm)	Weight (kg/m²)	Total board weight (kg)
18	650 x 2750	600 x 2700	20	32

*Other dimensions 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 Promat.

Promat SYSTEMPANEL™ Proma*X*® technology Cement Bound Matrix board is manufactured under a quality management system certified in accordance with ISO 9001: 2000 Certification.

AS FOR ALL NATURAL MATERIALS SUCH AS CONCRETE AND CLAY, THESE PRODUCTS MAY RELEASE DUST PARTICLES WHEN THEY ARE 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 DUST, IN PARTICULAR HIGH CONCENTRATIONS 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 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 APPROPRIATE MATERIAL SAFETY DATA SHEET, AVAILABLE UPON REQUEST.

Working With The Board

Cutting & Sawing

Use a fine-toothed saw. For shaped cuts use a jigsaw, keyhole or coping saw. Work fair face up and support the board throughout. A power saw can be used with a tungsten carbide tipped blade. Always use dust extraction and wear suitable Personal Protective Equipment.

Drilling

Use a high speed power drill (not hammer type) bits should have HSS tips. When drilling, always provide support to the back of the board to prevent break out.

Fixing

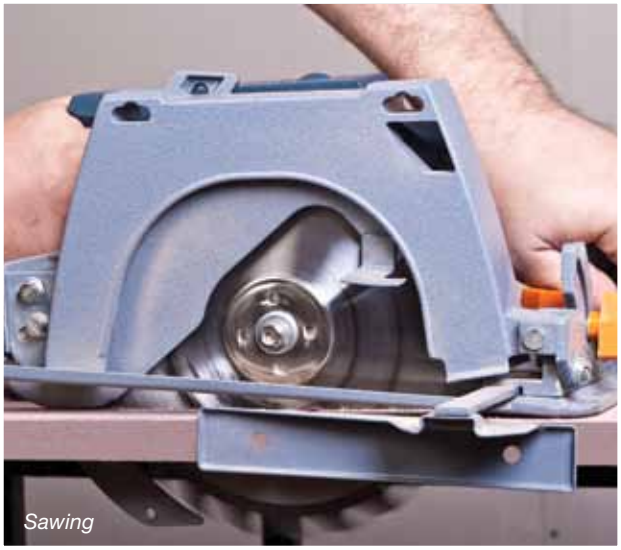
Panels should be supported and fixed as per the system specification (See pages 7 to 12). All fixings must be ceramic coated to avoid corrosion. Typically use stainless steel fixings or fixings that are suitable for use with treated pine. Contact Promat if any doubt.

- **Screw fix (no adhesive required to the joists)**

  Screws shall be needle point csk, self embedding head 45mm at 200mm centres into the timber joists or 32mm self-drilling csk into steel joists. It is important that these screws are driven flush or slightly below the surface to ensure any floor covering above is not affected. Wherever a screw needs to be installed closer than 25mm from the edge, it is recommended to pre-drill to ensure no breakage. Where screws are applied to the butt joint, pre-drill through the first layer to minimise potential breakage. These screws shall be at 150mm centres.

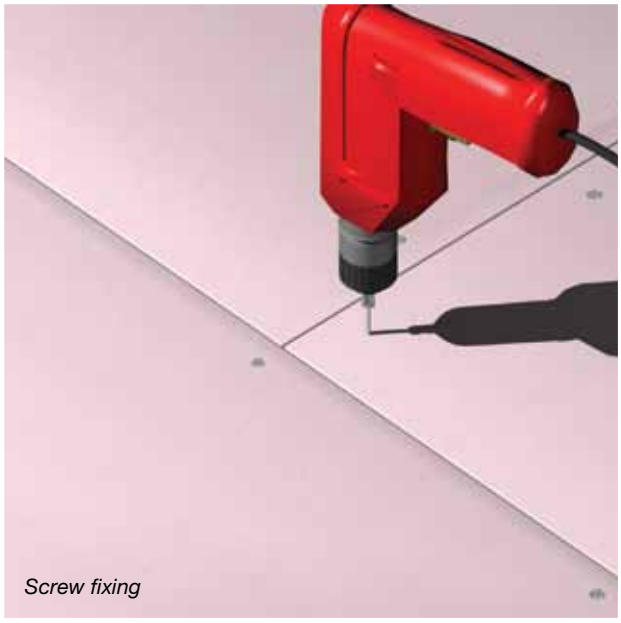
Planing & Sanding

The edges of the boards can be planed or smoothed with a surform, rasp or file. Use conventional glass papers for sanding.

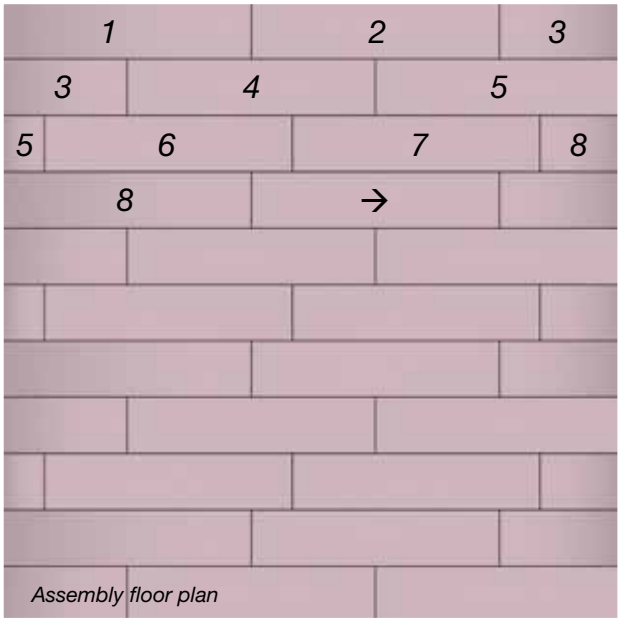


Sawing

Drilling



Screw fixing



Assembly floor plan

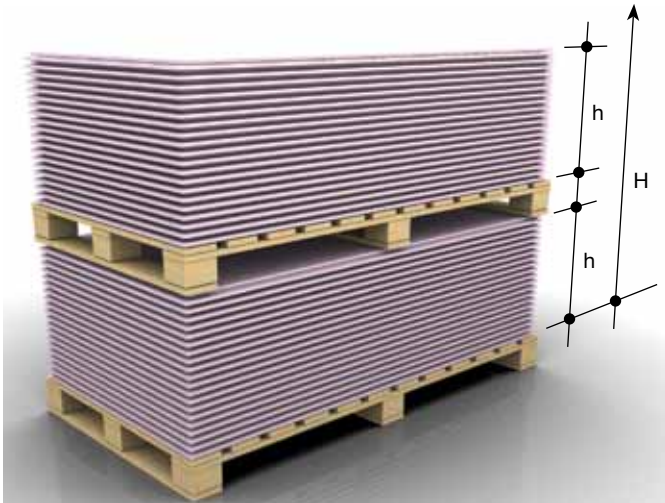
Handling & Storage

Carry boards on edge, and do not drop on their corners. Promat SYSTEMPANEL™ should be stored under cover on a flat base, clear of the ground. If stored on racks, boards should be fully supported across their width at not more than 1m centres. The following recommendations must be always taken into account when handling Promat SYSTEMPANEL™.

Lifting
Always lift boards off the board below, never slide board on board or drag the stack as this could mark the surface of the lower board.

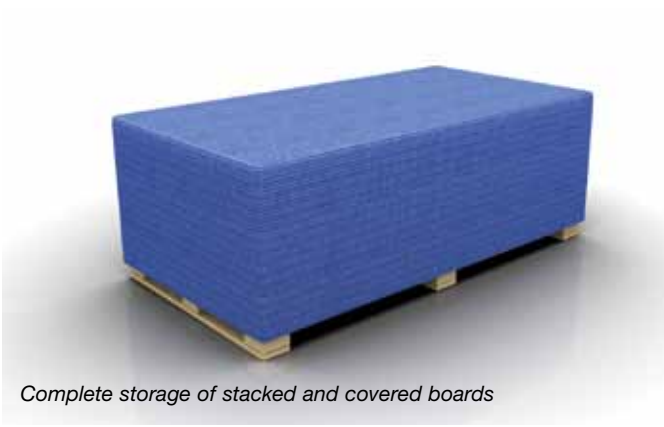
Lifting Promat SYSTEMPANEL™ board

Stacking
Boards should be stacked a maximum of 800mm high (h ≤800mm), on firm level ground. If two or more pallets are stacked, the total stack height must be not more than 3500mm (H ≤ 3500mm).



Maximum height of stacking

Protection
Boards should be stored under cover for protection against inclement weather on dry level ground, away from the working area of mechanical plant.



Complete storage of stacked and covered boards

Carrying
Always carry the boards on edge but do not store on edge.

Carrying Promat SYSTEMPANEL™ board

Health & Safety

No special precautions are necessary in handling or working. When power sawing or sanding in a confined space, dust extraction equipment must be used to control dust levels. Care should be taken to prevent injury from sharp edges and corners.

Do not leave boards lying about on site, on scaffolding or in high traffic areas, where risk of damage or injury is increased, and prevent any misuse which could result in personal injury or damage to boards. In the event of injury obtain proper medical treatment. The materials and the packaging used for distribution do not incorporate any substances considered to be hazardous to health.

Promat SYSTEMPANEL™

Party Wall, Fire and Acoustic Wall for Sole Occupancy Units

The Building Code of Australia (BCA) requires that the dividing walls between sole occupancy units achieve certain fire and acoustic levels. These walls are generally referred to as 'Party Walls' and are usually of load bearing construction.

They are generally required to achieve an FRL (fire resistance level) of 60/60/60 when tested to the test procedure set out in AS1530.4 2005 and must have an Rw +Ctr.(airborne) not less than 50.

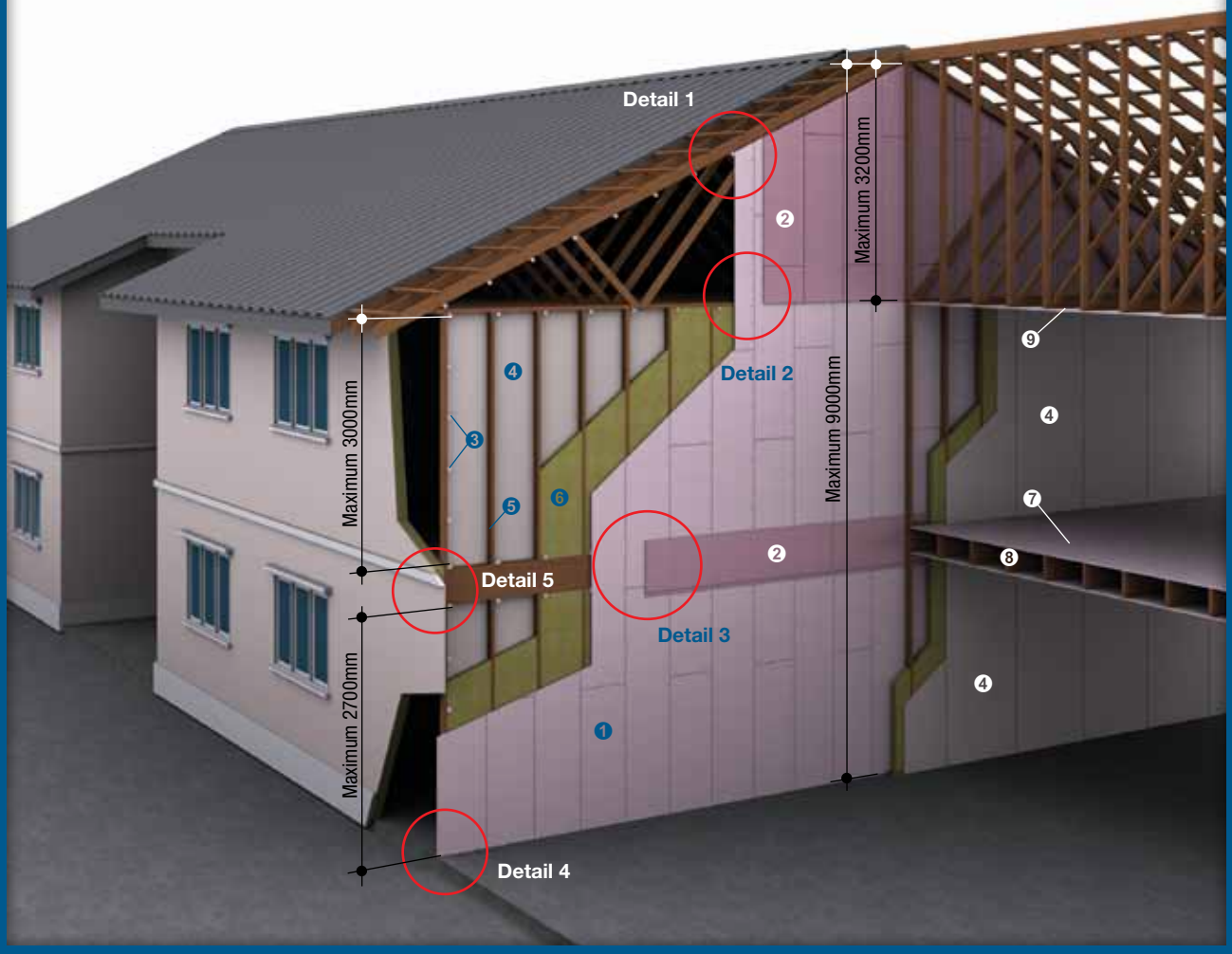
In addition, lightweight construction has to be of discontinuous construction with a minimum of 20mm separation between the wall framing leaves to achieve the necessary impact sound insulation. If a smaller gap is required please contact Promat.

- The Promat SYSTEMPANEL™ complies with all of the above when constructed in accordance with the manufacturers instructions.
- The timber framing shall be designed by a suitably qualified structural engineer in accordance with the requirements of the BCA and engineering codes and Standards e.g. AS1720.1 or AS1684, applicable to each individual project but should be no less than 90mm deep and no more than 600mm apart.
- Noggins shall be a minimum of 90mm deep designed in accordance with AS1720.1 or AS1684 and staggered installed at a maximum of 1500mm centres.
- The height of the central core shall be no more than 15 metres.
- Floor framing may be optionally arranged so that joists are parallel or perpendicular to the wall and do not require solid blocking at the ends of fire resistance.
- No services shall penetrate the Promat SYSTEMPANEL™ barrier but may penetrate the internal linings.
- The internal linings shall be 13mm fire rated plasterboard fixed in a vertical orientation in accordance with the manufacturers specification.
- Plasterboard jointing shall be finished in accordance with the manufacturers instructions.
- To achieve the acoustic requirements of such party walls, each leave shall have Insulco Acousti-Therm R2.5 Batts installed.
- The Promat SYSTEMPANEL™ can optionally be installed in vertical or horizontal orientation.
- The Promat SYSTEMPANEL™ Central Core panels are fixed together at 200mm centres vertically and horizontally on the rebated (lapped) locations using Ceramic coated or SS min. 10g x 16mm long flat head fine thread screws.
- A nominal 6mm bead of PROMASEAL®-A or PROMASEAL® AN Acrylic Sealant shall be applied to fill any gaps between the Central Core and slab.
- The Central Core brackets are Aluminium, 40mm wide x 90mm long x 50mm deep x 1.5mm thick and are fixed between the wall framing and central core on each side of the wall with 6g x 25mm long bugle head, needle point fine thread ZY screws (to the timber) and similar but Ceramic Coated screws to the Central Core.
- Fill any voids within the roof capping and junction of party wall and external linings with 'Rockwool cavity Seal'
- The timber flooring shall be solid timber, floor trusses or composite joists sized in accordance with AS1720.1 or AS1684 or designed by others.
- The ceiling lining may be 10mm or greater standard core plasterboard fixed and finished in accordance with the manufacturers instructions.
- An addition layer of 18mm thick Promat SYSTEMPANEL™ is fixed to the Central Core above the ceiling, and on the ground floor for the 12 & 15m high systems (Refer details page 8 & 9), at the floor joists (see Detail 3 on page 10) using Ceramic Coated screws.

Assembly party wall horizontal sheets

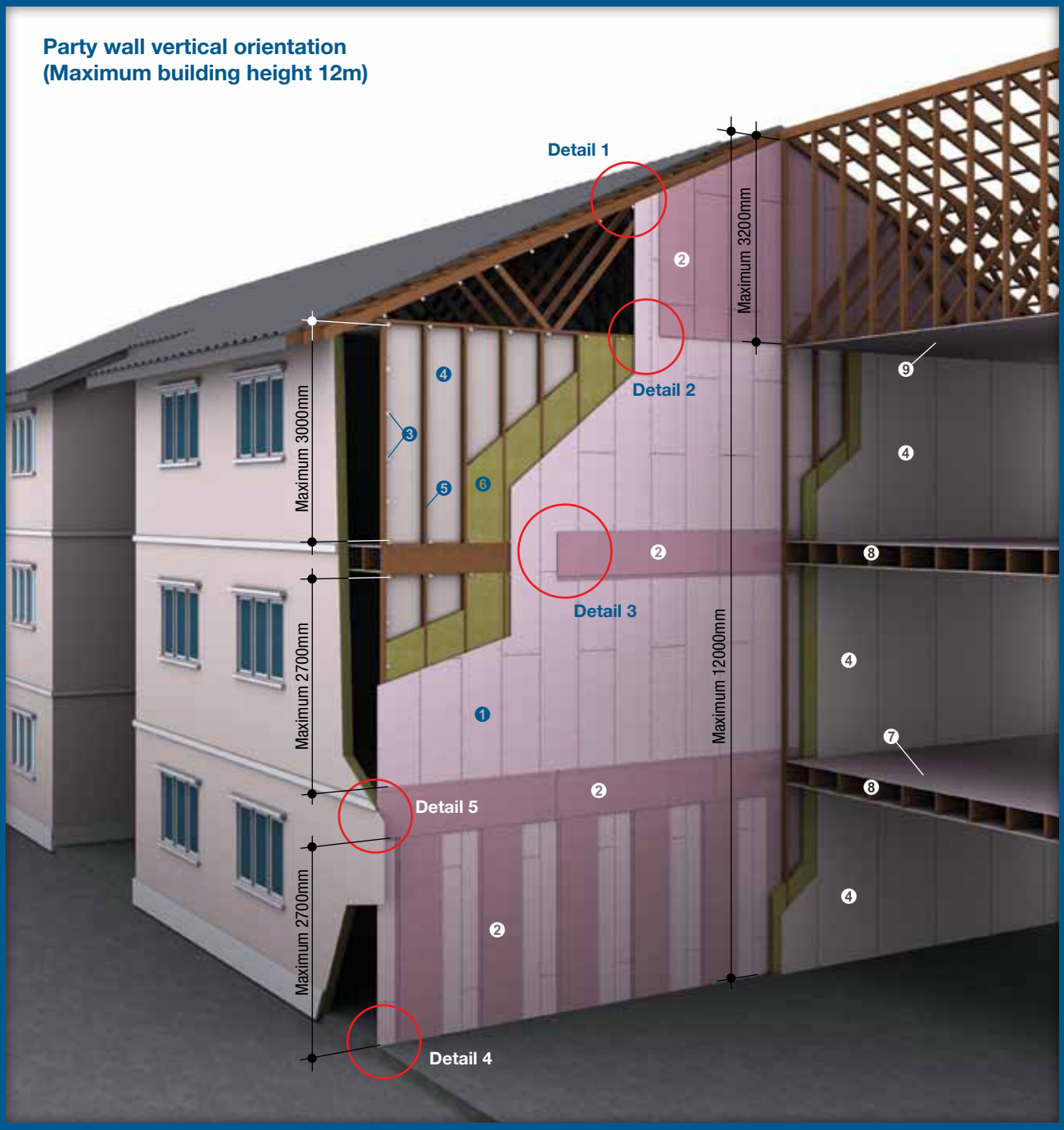
Assembly party wall vertical sheets

Party wall vertical orientation (Maximum building height 9m)



1. One layer of Promat SYSTEMPANEL™ 18mm thick fixed together at the lap joint with 10g x 16mm long Flat Head Screw Fine Thread ZY at nominal 200mm centres
2. Additional layer of Promat SYSTEMPANEL™ 18mm thick fixed to the centre core above the ceiling and at the floor joist
3. Aluminium central core bracket 40mm x 90mm x 50mm x 1.5mm fixed between wall framing and central core on each side of the wall. The long edge of the brackets are fixed to timber framing amd the short edge of the brackets are fixed to the central core with 6g x 25mm long Bugle Head Needle Point Fine Thread ZY screws
4. Fire resistant plasterboard 13mm thick fixed in vertical orientation in accordance with the manufacturers specification
5. Timber studs minimum 90mm designed in accordance with AS1720.1 or AS1684 at nominal 600mm centres
6. Insulco Acousti-Therm R2.5 Batts to achieve the acoustic requirements
7. Promat floor systems
8. Timber floor framing, size shall be in accordance with AS 1720.1 or AS 1684 or designed by others
9. Plasterboard 10mm thick or greater fixed or finished in accordance with the manufacturers instructions. If a fire resistant ceiling/ floor is required see the Promat SYSTEMPANEL™ loadbearing floor system at the back of this manual

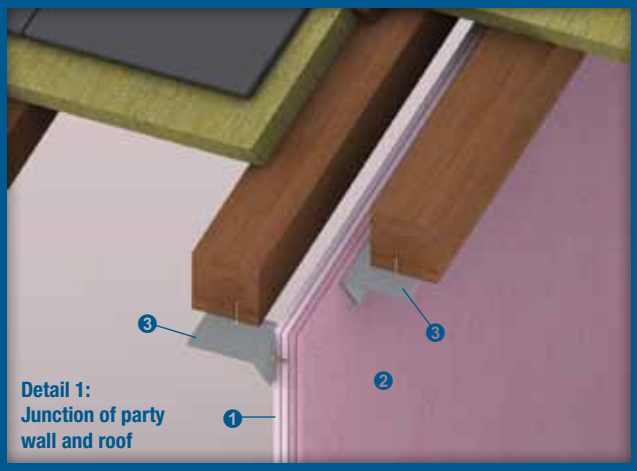
Party wall vertical orientation (Maximum building height 12m)



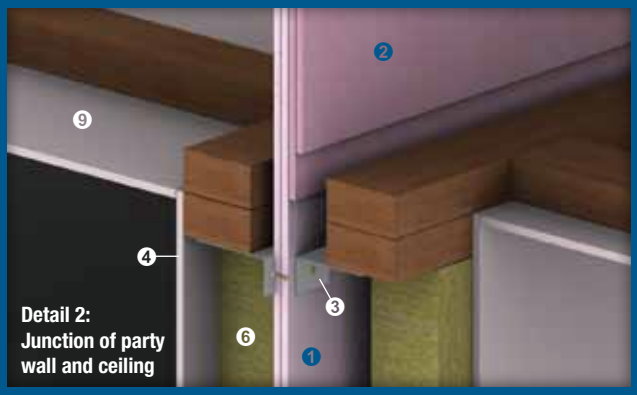
1. One layer of Promat SYSTEMPANEL™ 18mm thick fixed together at the lap joint with 10g x 16mm long Flat Head Screw Fine Thread ZY at nominal 200mm centres
2. Additional layer of Promat SYSTEMPANEL™ 18mm thick fixed to the centre core above the ceiling and at the floor joist and on the ground floor
3. Aluminium central core bracket 40mm x 90mm x 50mm x 1.5mm fixed between wall framing and central core on each side of the wall. The long edge of the brackets are fixed to timber framing amd the short edge of the brackets are fixed to the central core with 6g x 25mm long Bugle Head Needle Point Fine Thread ZY screws
4. Fire resistant plasterboard 13mm thick fixed in vertical orientation in accordance with the manufacturers specification
5. Timber studs minimum 90mm designed in accordance with AS1720.1 or AS1684 at nominal 600mm centres
6. Insulco Acousti-Therm R2.5 Batts to achieve the acoustic requirements
7. Promat floor systems
8. Timber floor framing, size shall be in accordance with AS 1720.1 or AS 1684 or designed by others
9. Plasterboard 10mm thick or greater fixed or finished in accordance with the manufacturers instructions. If a fire resistant ceiling/ floor is required see the Promat SYSTEMPANEL™ loadbearing floor system at the back of this manual

Party wall vertical orientation (Maximum building height 15m)

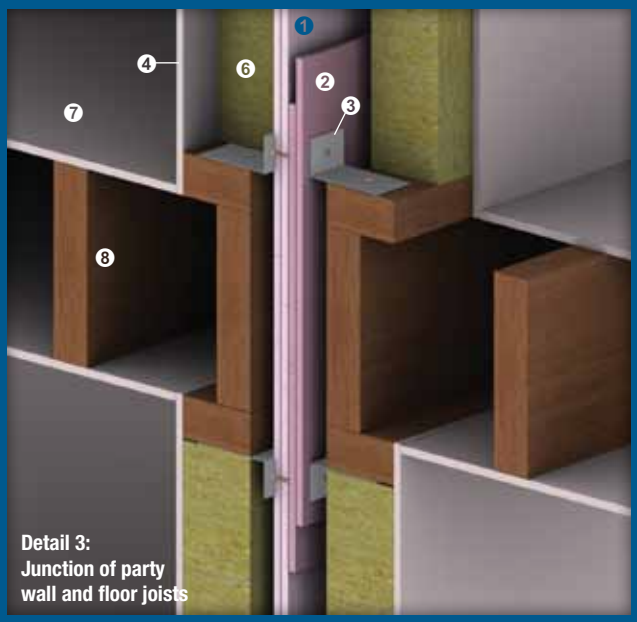
1. One layer of Promat SYSTEMPANEL™ 18mm thick fixed together at the lap joint with 10g x 16mm long Flat Head Screw Fine Thread ZY at nominal 200mm centres
2. Additional layer of Promat SYSTEMPANEL™ 18mm thick fixed to the centre core above the ceiling and at the floor joist and on the ground floor
3. Aluminium central core bracket 40mm x 90mm x 50mm x 1.5mm fixed between wall framing and central core on each side of the wall. The long edge of the brackets are fixed to timber framing amd the short edge of the brackets are fixed to the central core with 6g x 25mm long Bugle Head Needle Point Fine Thread ZY screws
4. Fire resistant plasterboard 13mm thick fixed in vertical orientation in accordance with the manufacturers specification
5. Timber studs minimum 90mm designed in accordance with AS1720.1 or AS1684 at nominal 600mm centres
6. Insulco Acousti-Therm R2.5 Batts to achieve the acoustic requirements
7. Promat floor systems
8. Timber floor framing, size shall be in accordance with AS 1720.1 or AS 1684 or designed by others
9. Plasterboard 10mm thick or greater fixed or finished in accordance with the manufacturers instructions. If a fire resistant ceiling/ floor is required see the Promat SYSTEMPANEL™ loadbearing floor system at the back of this manual



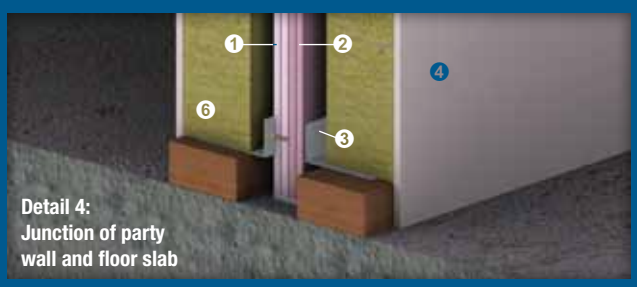
Detail 1:
Junction of party wall and roof



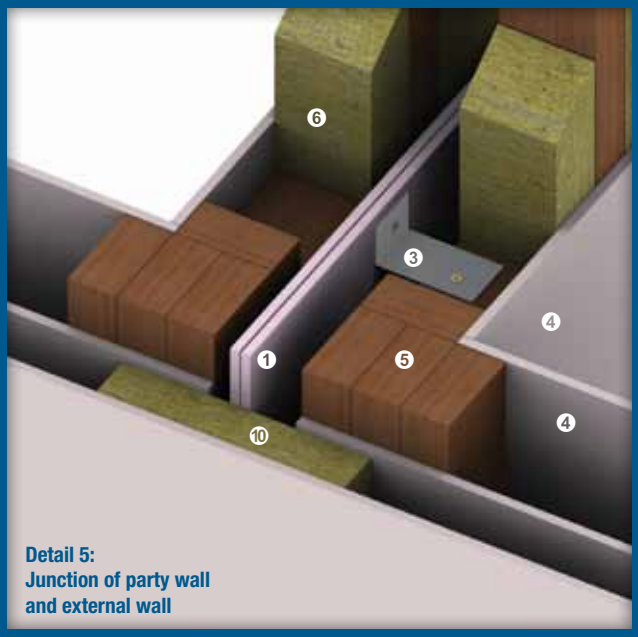
Detail 2:
Junction of party wall and ceiling



Detail 3:
Junction of party wall and floor joists



Detail 4:
Junction of party wall and floor slab



Detail 5:
Junction of party wall and external wall

1. One layer of Promat SYSTEMPANEL™ 18mm thick fixed together with 10g x 16mm long Flat Head Screw Fine Thread ZY at nominal 200mm centres
2. Additional layer of Promat SYSTEMPANEL™ 18mm thick fixed to the centre core above the ceiling at the floor joist, and on the ground floor for the 12 & 15m high systems
3. Aluminium central core bracket 40mm x 90mm x 50mm x 1.5mm fixed between wall framing and central core on each side of the wall. The long edge of the brackets are fixed to timber framing amd the short edge of the brackets are fixed to the central core with 6g x 25mm long Bugle Head Needle Point Fine Thread ZY screws
4. Fire resistance plasterboard 13mm thick fixed in vertical orientation in accordance with the manufacturers specification
5. Timber studs minimum 90mm designed in accordance with AS1720.1 or AS1684 at nominal 600mm centres
6. Insulco Acousti-Therm R2.5 Batts to achieve the acoustic requirements of such part walls
7. Promat floor systems
8. Timber floor framing, size shall be in accordance with AS 1720.1 or AS 1684 or designed by others
9. Plasterboard 10mm thick or greater fixed or finished in accordance with the manufacturers instructions
10. Rockwool cavity seal

Promat SYSTEMPANEL™

Fire and acoustic floor and ceiling system in lightweight construction for fire from either direction

The Building Code of Australia requires horizontal fire separation between sole occupancy units that are 3 storeys or more in height and of type A construction. For DTS (Deemed To Satisfy) solutions, sole occupancy units (Class 2 buildings) that are of 3 storey construction can be lightweight. If it is a 4 storey construction only the top three levels can be lightweight.

Traditionally floor construction in multi level buildings have been in concrete and the fire resistance testing has always been carried out from the underside.

However there is a trend in Australia, driven by innovation, cost cutting and a flow of building methods from overseas that has seen an increase in the demand to use lightweight floor construction and lightweight cassette floor systems.

One of the fundamental purposes of fire protection in the BCA is that 'A building is to be provided with safeguards to prevent fire spread to adjoining fire compartments (BCA, CF2 (d)).'

The 'Performance Requirements' in the BCA clearly state that 'A building must have elements which will, to the degree necessary, maintain structural stability during a fire.'

Research carried out by BRANZ (Building Research Association of New Zealand) show that fire attack from above a floor should be taken in to account in building design. The use of lightweight construction only highlights this issue.

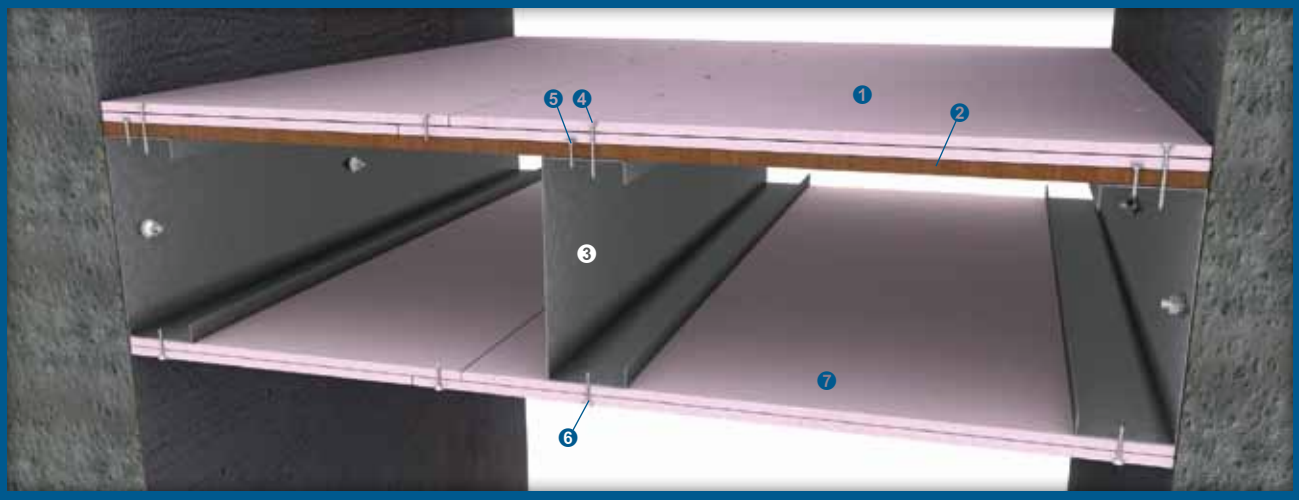
Fire tests carried out by registered laboratories also show that fire rated load bearing lightweight floors did not always perform in a manner that would satisfy the requirements of the BCA.

Promat set out to test floor systems that may have been expected and accepted to comply with the requirements of the BCA for horizontal fire separation for fire above and below and found that they did not.

Following much research and fire testing Promat is both proud and pleased to announce the introduction of a new floor / ceiling system design especially for the lightweight floor market that complies with fire and acoustic requirements for fire from either direction achieving FRL's of up to 120/120/120.

Promat believes that with the introduction of SYSTEMPANEL™ they have developed an economical solution to this problem.

The system uses a combination of plywood and sometimes PROMATECT® 50 together with the Promat SYSTEMPANEL™ on top of floor joists to give a load bearing floor. The ceiling consist of either PROMATECT® 100 or Promat SYSTEMPANEL™.

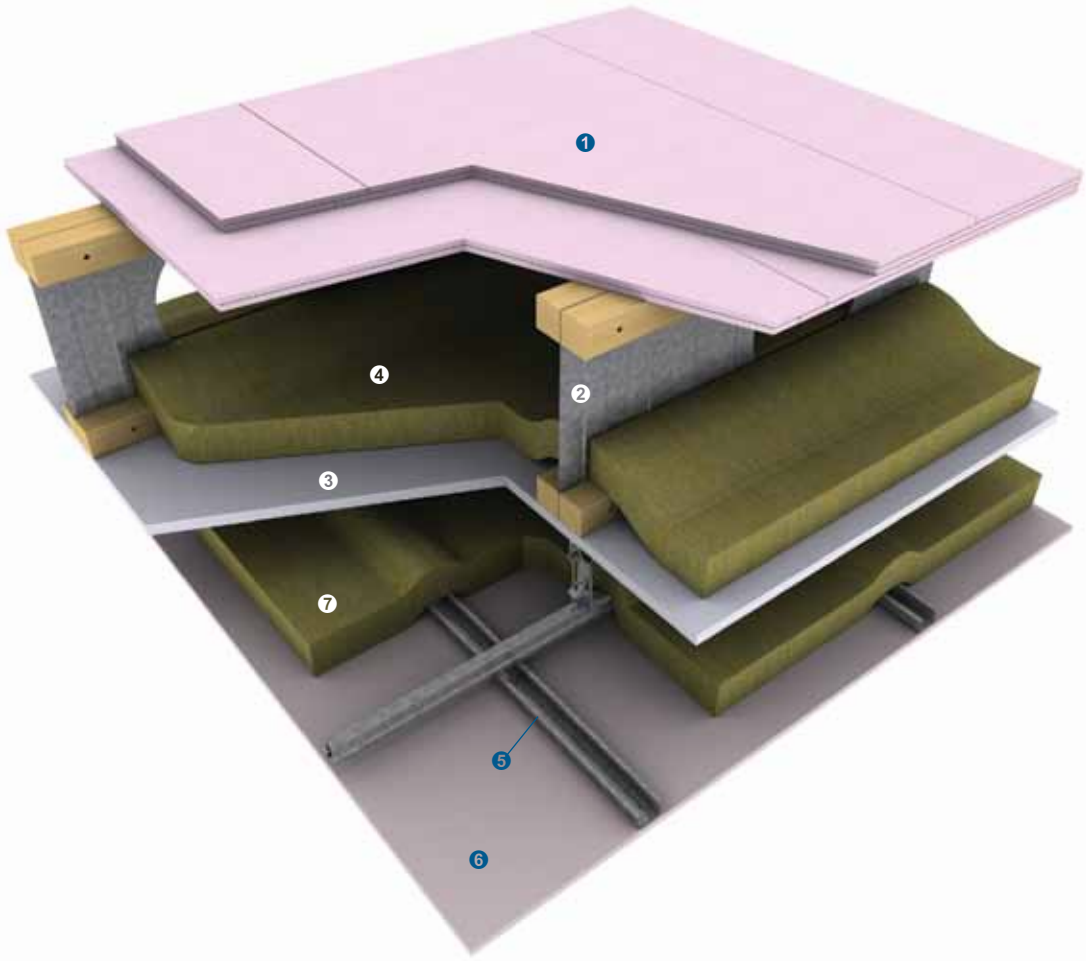


1. One layer of Promat SYSTEMPANEL™ 18mm thick, refer to table below
2. Plywood (and PROMATECT® 50 as applicable), refer to table below
3. Mild steel lipped C-Channel framework or timber joists as table below
4. Ceramic coated screws No. 8 x 50mm at nominal 200mm centres
5. Ceramic coated screws No. 8 x 25mm at nominal 200mm centnres
6. Ceramic coated screws No. 8 x 32mm at nominal 200mm centnres
7. Promat SYSTEMPANEL™ or PROMATECT® 100 ceiling lining, refer to table below

FRL	Joist size (Minimum size)	Ceiling Lining (Minimum)	Floor lining (Minimum)
60/60/60	Timber 140mm x 45mm (450mm or 600mm centres)	20mm thick PROMATECT® 100 or 18mm thick Promat SYSTEMPANEL™	12mm thick plywood + 18mm thick Promat SYSTEMPANEL™
	Steel Channel 203mm x 75mm x 1.45mm (450mm or 600mm centres)		
90/90/90	Timber 223mm x 48mm (450mm centres)	2 x 10mm thick PROMATECT® 100	18mm thick plywood + 18mm thick Promat SYSTEMPANEL™
	Steel Channel 203mm x 75mm x 2.5mm (450mm centres)	2 x 10mm or 20mm thick PROMATECT® 100 or 18mm thick Promat SYSTEMPANEL™	
120/120/120	Timber 223mm x 48mm (450mm centres)	2 x 10mm thick PROMATECT® 100	18mm thick plywood + 9mm thick PROMATECT® 50 + 18mm thick Promat SYSTEMPANEL™
	Steel Channel 203mm x 75mm x 2.5mm (450mm centres)	2 x 10mm or 20mm thick PROMATECT® 100 or 18mm thick Promat SYSTEMPANEL™	

Fire and Acoustic Floor/Ceiling System

Where additional acoustic rating are required for Airborne and Impact noise, additional insulation materials are included in the system as per figure below.



1. Two layers of Promat SYSTEMPANEL™ 18mm thick
2. TECBEAM 350mm floor joists at 450mm centres
3. PROMATECT® 100 20mm thick fire barrier
4. CSR R2.0 SOUNDSCREEN batts installed between joists (350mm vertical depth of cavity, governed by joists height)
5. Rondo suspended ceiling system, including 25mm top cross rail and 28mm furring channel
6. Fire resistance plasterboard ceiling 13mm thick
7. CSR R2.0 SOUNDSCREEN batts installed in the cavity (nominal 191mm vertical depth of cavity)

Minimum overall depth of system is 610mm.

Acoustic Performance Table	
Airborne	Impact
Rw: 59	Ln,w: 56
C: -2	CI: 0
Ctr: -7	Ln,w + CI: 56
Rw + Ctr: 52	
STC: 59	IIC: 54

IDENTIFICATION

Supplier name	**PROMAT AUSTRALIA PTY LTD**
Address	1 Scotland Road, Mile End, SA, Australia, 5031
Phone Number	(08) 8352 6759
Emergency Number	(08) 8352 6759

HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

Risk Phrases	Irritating to respiratory system.
Safety Phrases	Do not breathe dust.

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

Shipping Name	None allocated
United Nations Number	None allocated
DG Class	None allocated
Subsidiary Risk(s)	None allocated
Packing Group	None allocated

FIRST AID MEASURES

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	Exposure is considered unlikely due to product form/nature of use. However, if cutting or sanding with potential dust generation, inhalation should be avoided and the necessary protective measures be undertaken – Refer to section 8.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.
Poison Schedule	None allocated

FLAMMABILITY

Flammability	Non flammable.	**Hazchem code**	NOT AVAILABLE
Flash Point	NOT RELEVANT	**Autoignition Temperature**	NOT AVAILABLE
Lower Explosion Limit	NOT RELEVANT	**Upper Explosion Limit**	NOT RELEVANT

PERSONAL PROTECTIVE EQUIPMENT

Refer to Full Report for details

Normal Use

PHYSICAL AND CHEMICAL PROPERTIES

Appearance	PINK BOARD	**Vapour Pressure**	NOT RELEVANT
Odour	ODOURLESS	**Vapour Density**	NOT AVAILABLE
Odour Threshold	NOT AVAILABLE	**Solubility (water)**	INSOLUBLE
pH	7 to 9 (Approximately)	**Partition Coefficient**	NOT AVAILABLE
Melting Point	NOT AVAILABLE	**Autoignition Temperature**	NOT AVAILABLE
Boiling Point	NOT AVAILABLE	**Decomposition Temperature**	NOT AVAILABLE
Flash Point	NOT RELEVANT	**Viscosity**	NOT RELEVANT
Evaporation Rate	NOT RELEVANT	**Explosive Properties**	NOT EXPLOSIVE
Flammability	NON FLAMMABLE	**Oxidising Properties**	NON OXIDISING
Upper Explosion Limit	NOT RELEVANT	**Specific Gravity**	1.0 (Approximately)
Lower Explosion Limit	NOT RELEVANT	**% Volatiles**	NOT AVAILABLE

TOXICOLOGICAL INFORMATION

Information on toxicological effects

Health Hazard Summary Low toxicity - irritant. Under normal conditions of use, this product is not anticipated to present a hazard unless product is cut, drilled or sanded with the generation of irritating dust. When machining this product, airborne dust may be released, which may be hazardous to health. Do not inhale the dust. Avoid contact with skin and eyes. Use dust extraction equipment. Respect Regulatory Occupational exposure limits for total inhalable and respirable dust.

Eye Due to product form and nature of use, the potential for exposure is reduced. Product may only present a hazard if material is cut, ground or sanded with dust generation, which may result in irritation and lacrimation.

Inhalation Exposure to dust in high concentrations may result in the development of fluid in the lungs.

Skin Low irritant. Prolonged or repeated exposure to dust may result in irritation and dermatitis.

Ingestion Ingestion is considered unlikely due to product form.

Toxicity data

MAGNESIUM OXIDE (1309-48-4)
TCLo (inhalation) 400 mg/kg (human)

PERLITE (93763-70-3)
LD50 (ingestion) 12960 mg/kg (mouse)

GLASS, OXIDE (65997-17-3)
TCLo (inhalation) 5 mg/m³/7H/90W (rat)
TDLo (intraperitoneal) 50 mg/kg (rat)

Promat

For latest information of the Promat Asia Pacific organisation, please refer to www.promat-ap.com.

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