Promat

Promat PROMAFOUR® Board

A High Performance, Non-Combustible Fire Resistant Board

Suitable for high temperature output multi-fuel stove wall linings

www.promat.co.uk

Description

Specific application:

- Fire resistant board to line the walls surrounding a high temperature output multi-fuel stove for domestic and commercial properties

Promat PROMAFOUR® is a strong, lightweight, non-combustible building board, specifically developed to withstand high temperatures of up to 1000°C and suitable as a wall lining surrounding high temperature output multi-fuel stoves.

Promat PROMAFOUR® boards are cement bonded calcium silicate based insulation boards, formulated without inorganic fibres and do not contain formaldehyde.

The boards offer a superior combination of enhanced technical properties for very high temperature resistance, as well as low thermal expansion coefficients and low shrinkage, so there is no risk of cracking. The light grey colour boards are multi-purpose and are easy to handle.

Promat PROMAFOUR® boards are an ideal solution for the lining of walls surrounding high temperature output multi-fuel stoves as they comply with the requirements of Building Regulations Part J (Combustion Appliances and Fuel Storage Systems). The non-combustible boards provide a thermal barrier and reflect the majority of heat back into a room providing a warm, cosy and pleasant living environment.

Product Dimensions and Size Availability		
Thickness (mm)	**Dimensions (mm)**	**Weight (kg/m²)**
12	**2500 x 1250 / 1250 x 1250**	**12.3**
15	**2500 x 1250 / 1250 x 1250**	**15.4**

Note: *If building a false chimney breast for a cassette/inset type fire place, then the PROMAFOUR® system is the ideal, complete system. For further information visit www.promat.co.uk.*

Technical Data

Colour			Light grey
Building material class (BS EN 13501-1)			A1, Non-combustible
Classification temperature		°C	1000
Nominal density		kg/m³	970
Shrinkage @ classification temperature 1000°C, 24 h		%	1.41
Thermal conductivity			
	100°C mean	W/mK	0.183
	200°C mean	W/mK	0.185
	400°C mean	W/mK	0.192
	600°C mean	W/mK	0.204
Specific heat capacity		kJ/kg K	0.93
Linear change in length (20 to 600°C)		m/m K	6.4 x 10^{-6}
Alkalinity		pH-value	Approx. 12
Water vapour diffusion value		μ	51
Moisture content (air dry)		%	Nominal 6
Modulus of Elasticity E		N/mm²	2845
Bending strength	Long./Lat.	N/mm²	7.6/4.8
Tensile strength	Long./Lat.	N/mm²	4.8/2.6
Cold compressive strength		N/mm²	11

Performance Data

Fire Performance
Promat PROMAFOUR® is a non-combustible board in accordance with BS EN 13501-1 (A1 classification) and can withstand a maximum continuous operating temperature of 1000°C.

Moisture Resistance
Promat PROMAFOUR® boards are hygroscopic and vapour-permeable. Moisture content is therefore automatically regulated by the application environment. The boards retain their excellent dimensional stability even in damp and humid conditions.

Impact Resistance
Promat PROMAFOUR® boards have good impact resistance and high mechanical strength.

Biological and Chemical Resistance
Promat PROMAFOUR® is resistant to mould growth, most chemicals and attacks by rodents and insects.

Quality Manufacture
The manufacturing and production systems of Promat operate under a rigorous quality environmental and health and safety management system, certified as complying with BS EN ISO 9001: 2008, BS EN 14001: 2004 and OHSAS 18001: 2008.

Sitework

Easy to Work, Fix and Decorate
Promat PROMAFOUR® is easy to cut, drill, shape and can be worked in the same way as timber products with no special tools required.

Fixing Promat PROMAFOUR®
- Promat PROMAFOUR® should be fixed at maximum 300mm fixing centres to a non-combustible background (either masonry or steel stud framework).
- Boards should be pre-drilled with slightly oversize holes and the screws not over-tightened to allow for a degree of thermal movement.
- If fixed directly into block or brick, metal plugs and fixings should be used and not plastic ones. Promat PROMAFOUR® boards are supplied in 2500mm x 1250mm and 1250mm x 1250mm sheets. Promat recommends a minimum of 12mm thick Promat PROMAFOUR® is used and that a gap of at least 50mm is left between the boards and the back of the appliance.
- Promat recommends that the stove installation guide should be referred to for specific information relating to the minimum distances from the sides and top of the appliance to non-combustible materials, as well as more detailed information on hearth design.

Finishing Promat PROMAFOUR®
Plastering
- An advantage of Promat PROMAFOUR® is that it has a very smooth surface that does not need to be plastered; boards can be painted with minimal preparation to achieve a decorative finish (see ‘painting and wallpapering advice, opposite)
- If plastering is still desired, the boards should be fully sealed using an inorganic primer suitable for use at elevated temperatures, in line with the manufacturer’s recommendations. The board can then be plastered using traditional methods.
- Dependant on the expected temperature of the boards, a non-combustible, high temperature plaster may be required. Searching on the Internet for “high temperature plaster” will provide a list of manufacturer’s. Promat recommends that the advice of the selected plaster manufacturer is sought with respect to the suitability of their products for use at elevated temperatures and application to high suction substrates.

Painting and Wallpapering
- Promat PROMAFOUR® can be decorated using silicate based paints. Prior to painting, the boards should be sealed using an inorganic primer suitable for use at elevated temperatures, in line with the manufacturer’s recommendations. Promat recommends the advice of the selected decorative coating manufacturer is sought with respect to the suitability of the desired coating for use at elevated temperatures.
- Promat PROMAFOUR® can be finished with wallpapers that are suitable for use at elevated temperatures. Prior to wallpapering, the boards should be sealed using an inorganic primer suitable for use at elevated temperatures in line with the manufacturer’s recommendations.

Tiling
- Promat PROMAFOUR® boards should be sealed on all sides with an inorganic primer suitable for use at elevated temperatures, in line with the manufacturer’s recommendation. Screw boards at maximum 200mm centres to supports at maximum 400mm centres before applying tiles. All board joints must be supported. Promat recommends that the advice of the selected tile and tile adhesive manufacturer is sought with respect to the suitability of their products for use at elevated temperatures. Promat recommends the maximum tile weight does not exceed 30kg/m^2.

Important

Handling and Storing

- Carry boards on edge, do not drop on corners.
- Boards should always be lifted and not dragged across each other.
- Store fully protected from water on a flat base, clear of ground.
- Fully support boards across width at not more than 1m centres.

Health and Safety

All the requirements of the Health and Safety at Work Act should be met as well as any general or specific regulations applying to the area where the boards are being installed. When moving boards, protective gloves and footwear are recommended. No specific precautions are necessary when handling or working but, when using power saws or sanders, dust extraction equipment must be used to control dust levels required.

The board is not classified as a dangerous substance and so no special provisions are required regarding the carriage and disposal of the product to landfill. They can be placed in an on-site skip with other general building waste which should be disposed of by a registered contractor.

A safety data sheet is available from Promat's Customer Relations Department and, as with any other materials, should be read before working with the board.

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