

The Passive Fire Protection Handbook

Chapter 2: User Guide - Promat MASTERBOARD®

APPLICATIONS

- Partitions
- Ceilings
- Swimming pool ceilings
- Wall and roof linings
- Soffit, porch or canopy linings
- Service duct and pipe covers
- Boiler and airing cupboard linings
- Door upgrades



GENERAL DESCRIPTION

Promat MASTERBOARD® is a versatile Class 0 building board suitable for use in a wide range of internal and semi-exposed applications. It is a material of limited combustibility and can be used in constructions providing up to 30 minutes fire protection (60 minute for wall linings).

Promat MASTERBOARD® is a calcium silicate board reinforced with selected fibres and fillers. It is formulated without inorganic fibres and does not contain formaldehyde.

Promat MASTERBOARD® is off-white in colour and has a smooth finish on one face with a sanded reverse face. It can be left undecorated or can be easily decorated with paints, wallpapers or tiles.

Promat MASTERBOARD® is resistant to the effects of moisture, will not physically deteriorate when used in damp or humid conditions and can withstand temperatures up to 80°C and frequent temperature changes.

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

Table 2e Typical Mechanical Properties

Flexural strength $F_{rupture}$	Average, dry	N/mm ²	8.5
Modulus of elasticity E	Average, dry	N/mm ²	6500
Tensile strength $T_{rupture}$	Average, dry	N/mm ²	4.0
Compressive strength (perpendicular to board face)	Average, dry	N/mm ²	7.0



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Table 2f General Technical Data		
Designation	Calcium silicate	
Material class	Limited combustibility	
Surface spread of flame	Class 1	
Building Regulations classification	Class 0	
Nominal dry density (average) kg/m ³	1000	
Alkalinity (approximately) pH	7-10	
Thermal conductivity (approximately) at 20°C W/mK	0.22	
Coefficient of expansion (20-100°C) m/mK	9 x 10 ⁻⁶	
Nominal moisture content (ambient) %	6	
Moisture movement (ambient to saturated) %	≤ 0.15	
Water vapour resistivity MNs/gm (BS 7374: 1990)	80	
Thickness tolerance of standard boards (mm)	+0.5 to -0.5	
Length x Width tolerance of standard boards (mm)	± 3.0	
Surface condition	Front face	Smooth, unsanded
	Back face	Sanded

Table 2g Board Format Data			
Thickness (mm)	Length x Width (mm)	Approx. Weight (kg/m ²)	
		Dry	With approximately 6% moisture
6	2400 x 1200	6.0	6.4
	2440 x 1220	6.0	6.4
	2135 x 915	6.0	6.4
9	2400 x 1200	9.0	9.5
	2440 x 1220	9.0	9.5
12	2400 x 1200	12.0	12.7
	2440 x 1220	12.0	12.7

NOTE: Lay-in grid tiles are also available. Other sizes are available upon request.



NOTE: All physical property values are averages based on standard production. The figures can change dependent on the test methods used. If a particular value is of prime importance for a specification, please contact Promat Technical Services Department.