



### 1. PROMATECT®-H Matrix Engineered Mineral Board

PH



#### Applications

- Structural steel
- Ceilings, roofs and floors
- Partitions and external walls
- Ventilation and smoke extraction ducts
- Electrical & Mechanical services enclosures
- Fire resistant glazing
- Tunnel fire protection and concrete upgrading
- Smoke barriers, access hatch and panels
- Fire doors

#### Static Values

Modulus of elasticity E	Longitudinal N/mm <sup>2</sup>	3200
	Transverse N/mm <sup>2</sup>	2500
Flexural strength F <sub>rupture</sub>	Longitudinal N/mm <sup>2</sup>	10
	Transverse N/mm <sup>2</sup>	5.5
Tensile strength T <sub>rupture</sub> (6-12mm thickness)	Longitudinal N/mm <sup>2</sup>	5
	Transverse N/mm <sup>2</sup>	4
Compressive strength (average, perpendicular to board face)	N/mm <sup>2</sup>	8

For PROMATECT®-H, the longitudinal direction is identical with the direction of manufacture. In order to calculate permissible loading, application of the following values is recommended:  
Flexion ≤ /250

Bearing safety factor ≥ 3

In the following work sheets, certain makes of screws may be specified as being preferential in order to ensure a certain level of quality of installation. The physical properties given in the tables on this page are mean values given for guidance only. If certain properties are critical for a particular application it is advisable to consult Promat.

PROMATECT®-H is manufactured under a quality management system certified in accordance with ISO 9001: 2000 Certification and in accordance with the environmental standards of ISO 14001.

#### GENERAL NOTE:

**WHEN MECHANICALLY MACHINING THIS PRODUCT, AIRBORNE DUST MAY BE RELEASED WHICH MAY BE HAZARDOUS FOR HEALTH. DO NOT BREATHE THE DUST. AVOID CONTACT WITH SKIN AND EYES. USE APPROPRIATE DUST EXTRACTION EQUIPMENT AT ALL TIMES. RESPECT REGULATORY OCCUPATIONAL EXPOSURE LIMITS FOR TOTAL INHALABLE AND RESPIRABLE DUST. WEAR APPROPRIATE PERSONAL SAFETY PROTECTION AT ALL TIMES. FOR MORE DETAILED INFORMATION PLEASE CHECK THE MATERIAL SAFETY DATA SHEET APPLICABLE TO THIS PRODUCT, WHICH IS AVAILABLE UPON REQUEST.**

#### General Technical Data

Neutral designation	Matrix engineered mineral	
Material class	Non-combustible, according to DIN 4102: Part 1, BS 476: Part 4 and AS 1530: Part 1	
Surface spread of flame	Class 1 to BS 476: Part 7 and AS 1530: Part 3	
Building regulations classification	Class 0	
Nominal Dry density (average)	kg/m <sup>3</sup>	900
Alkalinity (approx.)	pH	12
Thermal conductivity (approx.) at 20°C	W/m·k	0.175
Coefficient of expansion (20-600°C)	m/mk	-6.4 x 10 <sup>-6</sup>
Diffusion resistance factor (approx.)	20	
Nominal Moisture content (air-dried)	%	5-10
Water absorption capacity (average)	g/cm <sup>3</sup>	0.5
Expansion under water, 100% saturation (maximum)	mm/m	0.5
Thickness tolerance of standard boards	mm	± 0.5
Length x Width tolerance of standard boards	mm	± 5
Surface condition	Front face smooth, back face dimple pattern	

Thickness (mm)	Length x Width (mm)	Approx. Weight (Kg/m <sup>2</sup> )		Thermal resistance (m <sup>2</sup> K/W)	Heat transition coefficient k (W/m <sup>2</sup> K)
		Dry	With approx. 6% moisture		
6	1220 x 2440	5.4	5.7	0.034	5.08
9	1220 x 2440	8.1	8.6	0.051	4.67
12	1220 x 2440	10.8	11.5	0.069	4.31
15	1220 x 2440	13.5	14.3	0.086	4.02
20	1220 x 2440	18.0	19.1	0.114	3.61
25	1220 x 2440	22.5	23.9	0.143	3.20

#### Screw Draw-Out Resistance

Screw designation & dimensions	Arrangement	Screwed depth (mm)	Draw-out resistance T <sub>rupture</sub> (N)
Quick-fix screws 3.9 x 45	in board face	20	–
	in board edge	20	–
	in board edge	30	–
Quick-fix screws 3.9 x 55	in board face	15	624
Timber construction screws 4.2 x 45 (Hi-Lo thread)	in board face	15	550
Quick-fix screws 4.0 x 40	in board face	15	584
Quick-fix screws 4.5 x 50	in board face	15	581
Screw inserts (Type B 3815) RAMPA	in board face	15	350



### 2. PROMATECT®-L Matrix Engineered Mineral Board

PL



#### Applications

- Structural steel
- Ventilation and smoke extraction ducts
- Electrical & Mechanical services enclosures

#### Static Values

Modulus of elasticity E	Longitudinal	N/mm <sup>2</sup>	1200
	Transverse	N/mm <sup>2</sup>	
Flexural strength F <sub>rupture</sub>	Longitudinal	N/mm <sup>2</sup>	3.1
	Transverse	N/mm <sup>2</sup>	
Tensile strength T <sub>rupture</sub>	Longitudinal	N/mm <sup>2</sup>	1.3
	Transverse	N/mm <sup>2</sup>	
Compressive strength (average, perpendicular to board face)		N/mm <sup>2</sup>	2.4

For PROMATECT®-L, the longitudinal direction is identical with the direction of manufacture. In order to calculate permissible loading, application of the following values is recommended:

Flexion  $\leq$  /250

Bearing safety factor  $\geq$  3

In the following work sheets, certain makes of screws may be specified as being preferential in order to ensure a certain level of quality of installation. The physical properties given in the tables on this page are mean values given for guidance only. If certain properties are critical for a particular application it is advisable to consult Promat.

PROMATECT®-L is manufactured under a quality management system certified in accordance with ISO 9001: 2000 Certification and in accordance with the environmental standards of ISO 14001.

#### General Technical Data

Neutral designation	Matrix engineered mineral		
Material class	Non-combustible, according to DIN 4102: Part 1, BS 476: Part 4 and AS 1530: Part 1		
Surface spread of flame	Class 1 to BS 476: Part 7 and AS 1530: Part 3		
Building regulations classification	Class 0		
Nominal Dry density (average)	kg/m <sup>3</sup>	450	
Alkalinity (approx.)	pH	9	
Thermal conductivity (approx.) at 20°C	W/m <sup>2</sup> k	0.083	
Coefficient of expansion (20-600°C)	m/mk	-2.5 x 10 <sup>-6</sup>	
Diffusion resistance factor (approx.)	3.2		
Nominal Moisture content (air-dried)	%	3.5-6	
Water absorption capacity (average)	g/cm <sup>3</sup>	0.77	
Expansion under water, 100% saturation (maximum)	mm/m	0.87	
Thickness tolerance of standard boards	mm	± 0.5	
Length x Width tolerance of standard boards	mm	± 5	
Surface condition	Front face smooth, back face honeycomb pattern		

Thickness (mm)	Length x Width (mm)	Approx. Weight (Kg/m <sup>2</sup> )		Thermal resistance (m <sup>2</sup> K/W)	Heat transition coefficient k (W/m <sup>2</sup> K)
		Dry	With approx. 6% moisture		
15	1200 x 2500	6.75	7.2	0.18	5.56
20	1200 x 2500 or 1200 x 3000	9.0	9.5	0.24	2.50
25	1200 x 2500 or 1200 x 3000	11.3	11.3	0.30	2.17
30	1200 x 2500 or 1200 x 3000	13.5	14.2	0.36	1.92
40	1200 x 2500 or 1200 x 3000	18.0	18.9	0.48	1.56
50	1200 x 2500 or 1200 x 3000	22.5	23.6	0.60	1.32

#### Screw Draw-Out Resistance

Screw designation & dimensions	Arrangement	Screwed depth (mm)	Draw-out resistance T <sub>rupture</sub> (N)
Quick-fix screws 3.9 x 45	in board face	20	360
	in board edge	20	373
	in board edge	30	550
Quick-fix screws 3.9 x 55	in board face	15	–
Timber construction screws 4.2 x 45 (Hi-Lo thread)	in board face	15	–
Quick-fix screws 4.0 x 40	in board face	15	–
Quick-fix screws 4.5 x 50	in board face	15	–
Screw inserts (Type B 3815) RAMPA	in board face	15	319

#### GENERAL NOTE:

WHEN MECHANICALLY MACHINING THIS PRODUCT, AIRBORNE DUST MAY BE RELEASED WHICH MAY BE HAZARDOUS FOR HEALTH. DO NOT BREATHE THE DUST. AVOID CONTACT WITH SKIN AND EYES. USE APPROPRIATE DUST EXTRACTION EQUIPMENT AT ALL TIMES. RESPECT REGULATORY OCCUPATIONAL EXPOSURE LIMITS FOR TOTAL INHALABLE AND RESPIRABLE DUST. WEAR APPROPRIATE PERSONAL SAFETY PROTECTION AT ALL TIMES. FOR MORE DETAILED INFORMATION PLEASE CHECK THE MATERIAL SAFETY DATA SHEET APPLICABLE TO THIS PRODUCT, WHICH IS AVAILABLE UPON REQUEST.



### 3. PROMATECT®-L500 Matrix Engineered Mineral Board

PE



#### Applications

- Ventilation and smoke extraction ducts
- Electrical & Mechanical services enclosures

#### Static Values

Modulus of elasticity E	Longitudinal N/mm <sup>2</sup>	1250
	Transverse N/mm <sup>2</sup>	
Flexural strength F <sub>rupture</sub>	Longitudinal N/mm <sup>2</sup>	3.3
	Transverse N/mm <sup>2</sup>	
Tensile strength T <sub>rupture</sub>	Longitudinal N/mm <sup>2</sup>	1.31
	Transverse N/mm <sup>2</sup>	
Compressive strength (average, perpendicular to board face)	N/mm <sup>2</sup>	2.5

For PROMATECT®-L500, the longitudinal direction is identical with the direction of manufacture. In order to calculate permissible loading, application of the following values is recommended:

Flexion ≤ /250

Bearing safety factor ≥ 3

In the following work sheets, certain makes of screws may be specified as being preferential in order to ensure a certain level of quality of installation. The physical properties given in the tables on this page are mean values given for guidance only. If certain properties are critical for a particular application it is advisable to consult Promat.

PROMATECT®-L500 is manufactured under a quality management system certified in accordance with ISO 9001: 2000 Certification and in accordance with the environmental standards of ISO 14001.

#### General Technical Data

Neutral designation	Matrix engineered mineral	
Material class	Non-combustible, according to DIN 4102: Part 1, BS 476: Part 4 and AS 1530: Part 1	
Surface spread of flame	Class 1 to BS 476: Part 7 and AS 1530: Part 3	
Building regulations classification	Class 0	
Nominal Dry density (average)	kg/m <sup>3</sup>	500
Alkalinity (approx.)	pH	9
Thermal conductivity (approx.) at 20°C	W/m·k	0.090
Coefficient of expansion (20-600°C)	m/mk	-2.5 x 10 <sup>-6</sup>
Diffusion resistance factor (approx.)		3.2
Nominal Moisture content (air-dried)	%	3-6
Water absorption capacity (average)	g/cm <sup>3</sup>	0.8
Expansion under water, 100% saturation (maximum)	mm/m	0.9
Thickness tolerance of standard boards	mm	± 0.5
Length x Width tolerance of standard boards	mm	± 5
Surface condition	Front face smooth, back face honeycomb pattern	

Thickness (mm)	Length x Width (mm)	Approx. Weight (Kg/m <sup>2</sup> )		Thermal resistance (m <sup>2</sup> K/W)	Heat transition coefficient k (W/m <sup>2</sup> K)
		Dry	With approx. 6% moisture		
20	1200 x 2500 or 1200 x 3000	10.0	10.5	0.24	2.50
25	1200 x 2500 or 1200 x 3000	12.5	13.2	0.30	2.16
35	1200 x 2500 or 1200 x 3000	17.5	18.4	0.42	1.72
40	1200 x 2500 or 1200 x 3000	20.0	21.0	0.48	1.56
50	1200 x 2500 or 1200 x 3000	25.0	26.3	0.60	1.32
60	1200 x 2500 or 1200 x 3000	30.0	31.5	0.72	1.13

#### Screw Draw-Out Resistance

Screw designation & dimensions	Arrangement	Screw depth (mm)	Draw-out resistance T <sub>rupture</sub> (N)
Quick-fix screws 3.9 x 45	in board face	20	330
	in board edge	20	342
	in board edge	30	510
Quick-fix screws 3.9 x 55	in board face	15	–
Timber construction screws 4.2 x 45 (Hi-Lo thread)	in board face	15	–
Quick-fix screws 4.0 x 40	in board face	15	–
Quick-fix screws 4.5 x 50	in board face	15	–
Screw inserts (Type B 3815) RAMPA	in board face	15	301

#### GENERAL NOTE:

WHEN MECHANICALLY MACHINING THIS PRODUCT, AIRBORNE DUST MAY BE RELEASED WHICH MAY BE HAZARDOUS FOR HEALTH. DO NOT BREATHE THE DUST. AVOID CONTACT WITH SKIN AND EYES. USE APPROPRIATE DUST EXTRACTION EQUIPMENT AT ALL TIMES. RESPECT REGULATORY OCCUPATIONAL EXPOSURE LIMITS FOR TOTAL INHALABLE AND RESPIRABLE DUST. WEAR APPROPRIATE PERSONAL SAFETY PROTECTION AT ALL TIMES. FOR MORE DETAILED INFORMATION PLEASE CHECK THE MATERIAL SAFETY DATA SHEET APPLICABLE TO THIS PRODUCT, WHICH IS AVAILABLE UPON REQUEST.