TRILITE® RMS

Reinforced Magnesium Silicate Board

TECHNICAL DATA

PHYSICAL & MECHANICAL PROPERTIES			
PROPERTY	**VALUE**	**UNIT**	**TEST STANDARD**
Bending Strength	12,1 - 17,1	N/mm²	EN 310
Compressive Strength	8,3	N/mm²	EN 12390-3
Modulus of Elasticity	5210 - 7845	N/mm²	EN 310
Impact Resistance	23	mm/mm	BS 5669 Part 1
Screw Withdrawal Strength	69 - 87	N/mm²	EN 320
Racking Strength	9 mm = 7,52 12 mm = 8,41	kN (0 kN load per stud)	EN 14358
	9 mm = 12,09 12 mm = 16,98	kN (5 kN load per stud)	
Thermal Conductivity		W/mK	EN 12664

WATER & MOISTURE RESISTANCE			
PROPERTY	**VALUE**	**UNIT**	**TEST STANDARD**
Water Vapour Transmission	48,1	g/m² vrk	EN 12572
Swelling in Thickness after water immersion	0,2	%	EN 317
Cyclic Test in Humid Conditions	-0,1	% (Ave. thickness swelling to 3 cycles of immersion in water for 72 hrs, freezing at -12°C to 20°C for 24 hrs, Drying at 70°C for 72 hrs)	EN 321
Movement from dry to saturated state	0,3	%	CNS 13778
Length expansion after water absorption	0,06	%	CNS 13778
Porosity	33,4	%	GB/T 7019-2014

TRILITE® RMS Board was tested by Swedish SP laboratory for its hygroscopic moisture movement in comparision with 2 other MgO boards in 12mm thickness. The boards were conditioned in a climate chamber with a temperature of 20°C and 95% RH (relative humidity). Visual finding results: After 42 days, no water was released or seen for the TRILITE RMS boards, while reference MgO sample#1 from factory A , started releasing water after 12 days, and MgO sample#2 from factory B started releasing water after 2 days.

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DURABILITY

PROPERTY	VALUE	INFO	TEST STANDARD
Water Impermeability	Class A	No signs of water penetration after 24 hours, NO dampness or dripping on the undersides of the board.	EN 12467
Heat Rain Incorporating Thermal Shock from water spray (50 cycles)	Class A	No bowing, warping, cracking, or delamination occurred. No deterioration in their water impermeability performance after the test showing neither traces of moisuture nor water drop formation.	EN 12467
Freeze-Thaw (100 cycles)	Class A	There was no visual damage noted on completion of the 100 cycles.	EN 12467
Soak / Dry (50 cycles)	Class A	There was no visual damage noted on completion of the 50 cycles.	EN 12467
Bending Strength after 24 hours soak in water	Class A	Classified as a Class EN 12467 4, Category A board.	EN 12467

SAFETY

PROPERTY	VALUE	INFO	TEST STANDARD
Fungi Resistance	100 %	Fungal Resistant - No growth.	ASTM C-1338
Alkalinity	Sodium Oxide : 56.7% (pH between 9.5 - 10)		BS 6829
Asbestos Content	0 %	No Asbestos Content.	NIOSH 9002
Sulfidi S^2 Content	0 %	No Sulphide S^2 Content.	EN 196-2
Formaldehyde Content	0 %	NO Formaldehyde Content.	ISO 14184-1
Evaluation of Toxic Fumes generated during burning	0 %	100% Non-toxic below the IDLH value of listed gases, summation index R, is less than 0.3.	BS 6853
Emission Measurements	M1	Eurofins Expert Services Oy	EN 16516, EN 717-1, M1 protocol

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PALOLUOKITUS JA PALONKESTÄVYYS

PROPERTY	VALUE	INFO	TEST STANDARD
Fire Classification	A1	Incombustible	EN 13501-1
Surface Burning Characteristics	Class A	USA standard	ASTM E-84
Flame Spread	0	USA standard	ASTM E-84
Smoke Developed	0	USA standard	ASTM E-84
Fire Rating	71 minutes	Trilite RMS 9 mm	BS 476 Part 22
	180 minutes	Trilite RMS 12 mm	
Fire Rating	132 minutes	Trilite RMS 12 mm - STEEL support	BS 476 Part 20
	123 minutes	Trilite RMS 12 mm - TIMBER support	
Combustibility	Incombustible		EN 1182 ja BS 476 Part 4
Bomb Calorimeter Test (Gross heat of combustion)	> 0,606 MJ/kg		EN ISO 1716
Surface Spread of Flame	Class 1		BS 476 Part 7

SOUND INSULATION PERFORMANCE

PRODUCT	VALUE	INFO	TEST STANDARD
Trilite RMS 9 mm	RW 45 dB	9 mm partition wall	EN ISO 717-1
Trilite RMS 12 mm	RW 48 dB	12 mm partition wall	EN ISO 717-1

DIMENSIONAL TOLERANCES

PROPERTY	VALUE	UNIT
Density	1050 ± 10 %	kg/m³
Length & Width	-2 – +3	mm
Straightness of Edges	≤ 2	mm
Squareness of Boards	≤ 5	mm

CE Marking Conformity Number : 14SH200005029 according to European Construction Products Regulation (No. 305/2011).

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APPLICATION	3 mm	4 mm	6 mm	8 mm	10 mm	12 mm	15 mm	18 mm
Door Skins & Decoration Board	•	•	•					
Fire Door Production		•	•	•	•	•		
Substrate for Lamination	•	•	•	•				
Substitute for Traditional Drywall			•	•	•	•		
Interior Wall, Linings & Partition				•	•	•		
Suspended Ceiling			•	•				
Fire Rated Partitions and Ceilings			•	•	•	•		
Partition of Washroom, Wet Areas			•	•	•			
Mounting Surface for Ceramic Tile					•	•		
Soffits, Canopies and Porch Lining		•	•	•				
Fascia, Lath & Eaves		•	•	•				
Core of Fire Rated Door			•	•	•	•		
External Wall Cladding					•	•	•	
Roof Decking (Underlay of Roof Tiles)							•	•
Industrial Wall Lining of Steel Frame					•	•	•	
Elevated Floor Underlayment							•	•
Fire Rated Cover (Ducts, Ventilation, Pipes)			•	•	•	•	•	
Smoke Barriers & Access Panels			•	•	•	•		
Sandwich Panel Production			•	•	•	•		
Prefabricated Housing Panel			•	•	•	•		
High Fire Risk Areas & Passive Fire Protection	•	•	•	•	•	•	•	•
Exterior & Interior Sheath	•	•	•	•	•	•	•	•