TRILITE® RMS BOARD

Technical Data

Test Properties	Test Standard	Test Result	Unit
Physical & Mechanical Properties			
Bending Strength	BS EN 310	**12.1 ~ 17.1**	N / mm2
Compressive Strength	BS EN 12390-3	**8.3**	N / mm^2
Modulus of Elasticity	BS EN 310	**5210 ~ 7845**	N / mm^2
Impact resistance	BS 5669 : Part 1	**23**	mm / mm
Screw Withdrawal strength	BS EN 320	**69 ~ 87**	N / mm^2
Racking Strength	EN 14358	**9mm = 7.52** **12mm = 8.41**	kN (on 0kN load per stud)
		9mm = 12.09 **12mm = 16.98**	kN (on 5kN load per stud)
Thermal Conductivity	EN 12664	**0.21**	W/mK
Water & Moisture Resistance Properties			
Water Vapour Transmission	BS EN ISO 12572	**48.1**	g / m^2 . Day
Swelling in Thickness after immersion in water	BS EN 317	**0.2**	%
Cyclic Test in Humid Condition	BS EN 321	**-0.1%**	Ave. thickness swelling to 3 cycles of immersion in water for 72 hrs, freezing at -12℃ to 20℃ for 24 hrs, Drying at 70℃ for 72 hrs.
Movement from dry to saturated state	CNS 13778	**0.3**	%
Length expansion after water absorption	CNS 13778	**0.06**	%
Porosity	GB/T 7019-2014	**33.4**	%

TRILITE® RMS Board was tested by renowned 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 ℃ and 95% RH (relative humidity). Visual finding results : After 42 days, no water was release 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.

TRILITE® RMS BOARD

Technical Data

Test Properties	Test Standard	Test Result	Unit
Durability			
TRILITE® RMS Board fulfill the requirements of the highest durability category "A" according to EN 12467 and may be subjected to heat, high moisture and sever frost.			
Water Impermeability	EN 12467	**Category A**	No signs of water penetration after 24 hours, NO dampness or dripping on the undersides of the board.
Heat Rain Incorporating Thermal Shock from water spray (50 cycles)	EN 12467	**Category 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.
Freeze-Thaw (100 cycles)	EN 12467	**Category A , post Freeze-Thaw MOR = 12.9 MpA**	There was no visual damage noted on completion of the 100 cycles
Soak / Dry (50 cycles)	EN 12467	**Category A, post soak/dry MOR = 13.5 MpA**	There was no visual damage noted on completion of the 50 cycles
Bending Strength after 24 hours soak in water	EN 12467	**Category A, MOR = 15.3 MpA**	Classified as a Class 4, Category A board
100% Safe, Non-Toxic and Non-Harmful to Human Health			
Fungi Resistance	ASTM C-1338	**Fungal Resistant - No growth**	Biosan Lab - USA
Alkalinity	BS 6829	**Sodium Oxide : 56.7%** **(ph between 9.5 - 10)**	TUV Sud - Singapore
Asbestos Content	NIOSH 9002	**No Asbestos Content**	TUV Sud - Singapore
Sulphide S^2 content	BS EN 196-2	**No Sulphide S^2 Content**	TUV Sud - Singapore

TRILITE® RMS BOARD

Technical Data

Test Properties	Test Standard	Test Result	Unit
Formaldehyde Content	ISO 14184-1	**NO Formaldehyde Content**	TUV Sud - Singapore
Evaluation of Toxic Fumes generated during burning	BS 6853	**100% Non-toxic below the IDLH value of listed gases, summation index R, is less than 0.3**	TUV Sud - Singapore
Fire Rating and Fire Resistance Performance			
Europe Fire & Building Classification Standard	EN 13501-1	**A1 or $A1_{fl}$**	A1 = Europe's highest fire classification, BRE tested
Surface Burning Characteristic to USA Standard	ASTM E-84	**Class "A"**	NGC - USA tested
Flame Spread	ASTM E-84	**0**	NGC - USA tested
Smoke Developed	ASTM E-84	**0**	NGC - USA tested
Fire Rating - 9mm thickness boards	BS 476 Part 22	**71 minutes**	Exova Warrington - UK
Fire Rating - 12mm thickness with steel & timber support	BS 476 Part 20	**132 minutes (Steel) 123 minutes (Timber)**	CERAM - UK
Fire Rating - 12mm Single Specimen	BS 476 Part 20	**180 minutes**	CERAM - UK
Combustibility	EN 1182 and BS 476 Part 4	**Non-combustible**	Warrington Tested
Bomb Calorimeter Test (Gross heat of combustion)	BS EN ISO 1716	**Below 0.606 MJ/kg**	BRE- UK Tested
Surface Spread of Flame	BS 476 Part 7	**Class 1**	Warrington Tested
Sound Insulation Performance			
12mm TRILITE® RMS partition wall	BS EN ISO 717-1	**Rw = 48**	dB
12mm TRILITE® RMS partition wall	BS EN ISO 717-1	**Rw = 45**	dB
Dimensional Tolerances			
Density	Kg / m^3	**1050 ± 10%**	
Length & Width	mm	**- 2mm, + 3mm**	
Straightness of Edges	mm	**≦ 2mm**	
Squareness of the boards	mm	**≦ 5mm**	

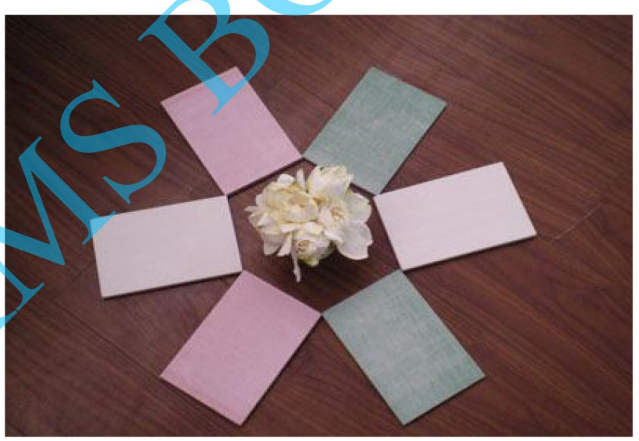
CE Marking Conformity Number : 14SH200005029 according to European Construction Products Regulation (No. 305/2011).

TRILITE® RMS BOARD

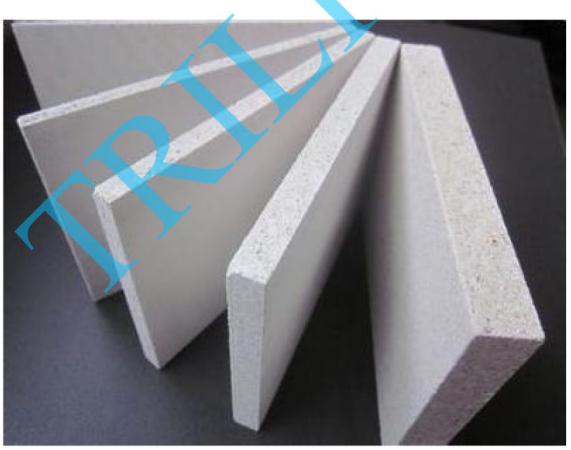
Types of Edges :

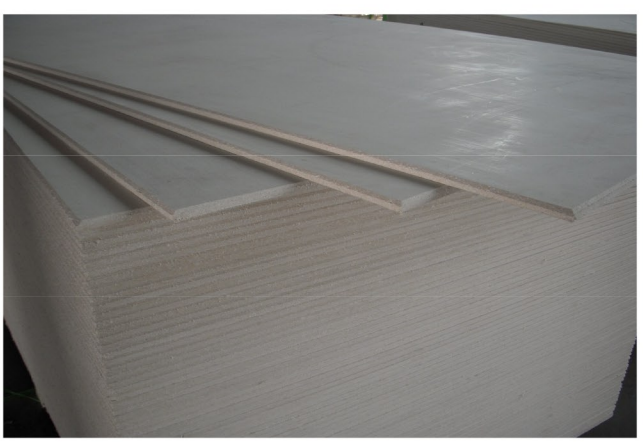
Square edge	45° bevelled edge	Tapered edge
		

Colored Boards :



TRILITE® RMS Appearance Quality :





- The surface of the board is flat and smooth and free from defects, such as corrugation, groove scratch, dirt or taint. Clean and dust free as well as well packaged in export standard strong pallets.