

WFI PANELS MAGNESIUM SULFATE BOARD

TEST ITEM	TEST METHOD	TEST REQUIREMENT	TEST RESULT
Flexural Strength	ASTM C1185	Dry condition : ≥ 4000 kPa Wet condition : ≥ 4000 kPa	Dry condition : 11300kPa Wet condition : 8500kPa
Bending Strength	ASTM E330		≥ 15 MPa
Freeze-Thaw Cycle	ASTM C666-97	No disintegration after 25 cycles	No disintegration after 25 cycles
Dimensions and Tolerance	ASTM C1185	Tolerance: Length & width: $\pm 0.5\%$ Maximum ≤ 6 mm Thickness: ± 1.0 mm	Claimed : 2400*1200*10mm Measured tolerance : Length : 0.4% Width : 0% Thickness : 0.05%
Water Content	ASTM C1186		$\leq 10\%$
Moisture Movement	ASTM C1186	As Reported	$\leq 20\%$
Water Absorption	ASTM C1186 48h submersion	As Reported	$\leq 20\%$ maximum saturation
Water Expansion			Less than 0.02% from ambient to saturation (slow absorption rate)
Sweating	ASTM C1186		Absence of water drops at bottom
Compression Indentation	ASTM D2394	Max. deformation at 1250 psi ≤ 1.3 mm	Max. deformation at 1250 psi: 0.5mm
Impact Strength	ASTM D5628		≥ 4 KJ/m ²
Nail-head Pull Through	ASTM D1037	≥ 560 N	Mean value : 1675N
Humidified Deflection	ASTM C1396	For use as ceilings ≤ 7.9 m For use as base ≤ 1.62 m	Mean value : 0.30mm
Falling Ball Impact	ASTM D1037	No damage to top or bottom surfaces at a 305mm drop with 535g ball	Absence of damage to top or bottom surfaces at 305mm drop with 535g ball
Shear bond strength (Dry-set Portland cement) ²	ANSI A118.1	≥ 345 kPa	Mean value : 1390kPa
Shear bond strength (Latex Portland cement mortar) ³	ANSI A118.11	≥ 345 kPa	Mean value : 1330kPa
Modulus of Elasticity	ASTM C947		6045N/mm ²
Fire Rating 2 Hours	ASTM E119-12 & CAN/ULC-S101-07		Fire resistance rating of 120 minutes
Surface Burning	ASTM E84 & UL 723	Flame spread index ≤ 10 Smoke developed index ≤ 5	Flame-spread index = 0 Smoke developed index = 0 Class A
Non Combustible	ASTM E136		Class A
Sound Insulation	ASTM D3273		42 dB reduction with 100mm wall (10mm MgO board + 80mm rock wool + 10MgO board)
Thermal Conductivity	ASTM D696-08		0.216W/(mk)
Toxicity	U-Pitt Protocol		None
Recyclable	ASTM C666		Yes
Surface Alkaline			Ph 10~12