

# TECHNICAL DATASHEET



## AQUAMAG<sup>®</sup>

Magnesium (MgO) Floor Board

[www.aquamag.ae](http://www.aquamag.ae)



### AQUA BOARDS BUILDING MATERIALS FZ-LLC

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## Description

Aquamag® Mgo Floor boards represents a quantum shift in flooring technology and has been developed to rapidly improve on flooring technology. Its fire, water, mold and mildew resistance properties far outweigh any competing products like plywood or OSB floor sheathing. Aquamag® Mgo Floor boards provides a superior flooring solution that is unaffected by environmental exposure during construction.

Aquamag® Mgo Floor boards reduces the risk of fire, is not affected by adverse weather conditions, and drastically improves your building's structural performance. Aquamag® Floor are Non-Metal Corrosive, MgO Boards tested for Non Chloride Non Corrosive Content. Aquamag® Floor boards provide second to none MgO Tongue and Groove flooring that are made with high quality composites that are also environmentally friendly and sustainable.

We supply our boards as all in one building solution that is fire resistant and can withstand various other extreme climatic conditions. Our goal is to protect homes and properties as well as strengthen building structures from such unpredictable threats. Our tested and approved boards are different to conventional flooring systems they are high impact, termite resistant, all while providing a very low carbon footprint of less than 5%. Aquamag® Mgo Floor board for interior and exterior protection allows for a durable solution for all types of flooring and exterior decking.

## Applications

- Subfloor
- Suspended Floors
- External Decking
- Floor Underlay

## Available Colors

- White / Grey

## Loading and Unloading Boards

Aquamag® Mgo Floor boards are supplied on pallets suitable for fork lift unloading by fork lift. If off-loading by crane and slings is envisaged, care should be taken to avoid damaging the edges of the boards. All pallets and crates can be safely handled by using a fork lift or hoisting equipment and straps. Steel cables or chains should not be used as they will damage both the pallet and the boards.

Where crates are removed from a box container, care should be taken not to subject crates and pallets to any impact shock, as this could result in cracking of the boards. Always drive the delivery vehicle as close as possible to where the boards are to be used. When transporting the boards, it is essential to secure the pallets to prevent sliding. If the boards are subsequently moved around the site, they should be placed on a rigid base suitable for lifting by forklift. Aquamag® Mgo Floor boards should always be stored on a rigid base.

## Storage

All Aquamag® Mgo Floor boards are supplied with a protective plastic sheet wrap. This protection should not be removed until the boards are ready for use. In general, the following steps should be taken to ensure that the boards remain in good condition during storage. All Aquamag® Mgo Floor boards should be stored on covered and dry level ground, away from the working area or mechanical plant.

Pallets should be stored safely on firm level ground. If two or more pallets are stacked, the following guidance as well as local legislation and regulations must be observed. The number of pallets per stack is mainly determined by site conditions such as ground conditions, flatness and load capacity of the ground.

Maximum number of pallets stacked one above the other under warehouse conditions: All boards – maximum 5 pallets, recommended < 4 pallets. All boards must be protected from inclement weather. Cover protection is essential for stacked boards. All boards must be stored under cover. Complete protection for stacked and covered boards in storage.

Thickness	Length	Width	20ft Container
(mm)	(mm)	(mm)	(no. of boards)
20	2400, 2700	600	576 (8 Horizontal Pallets)
20	2400, 2700	900, 1100	384 (8 Horizontal Pallets)
20	2400, 2700	1200	192 (4 Horizontal Pallets)

## Available Edges:

Square, Ship Lap, Tongue and Groove

## Technical properties

Property	Testing Standard	Result	
Reaction to fire	EN 13501-1	Class A1 (Non-Combustible)	
Dimensions (length x width x thickness)		1200mm x 2400mm x 20mm	
Tolerance on length and width	EN 12467:2012	Length Tolerance: 0 mm Width Tolerance: 0 mm Complied with Level I	
Tolerance on thickness	EN 12467:2012	≤ + 0.5 mm	
Straightness of edges	EN 12467:2012	Max.: 0.02% Complied with Level I	
Squareness of edges	EN 12467:2012	Max.: 0.2mm/m Complied with Level I	
Average weight	ASTM C1186-2008	22.20 kg/m <sup>2</sup>	
Apparent density	EN 12467:2012	1100 - 1200 kg/m <sup>3</sup>	
Moisture movement	EN 12467:2012	Length direction: 0.11% Width direction: 0.13%	
Water impermeability	EN 12467:2012	No formation of drops of water	
Water vapour permeability	EN ISO 12572, Condition C	Water vapour resistance value $\mu$ : 19.1	
Freeze-thaw (100 Cycles)	EN 12467:2012	Category A, Ratio RL: 0.62	
Heat-rain (50 Cycles)	EN 12467:2012	Category A, No visible cracks, delamination, warping and bowing or other defects.	
Release of dangerous substances	EN 12467:2012	Asbestos content: Negative Meet the requirement of EU REACH Regulation SVHC exceeds 0.1% (w/w)	
Average Screw pull out	BS EN 14566: 2008 & A1: 2009	1171 N	
Average Screw pull through	BS EN 14566: 2008 & A1: 2009	2173 N	
Moisture content (at 90±2°C)	EN 318 / ASTM C 1185 Section 10	8.5 %	
Chloride ion determination	ASTM C 871-11	0.019%	
Smoke development index (SDI)	ASTM E84-18, UL 723-10	25 (CLASS A)	
Flame development index (FDI)	ASTM E84-18, UL 723-10	0 (CLASS A)	
Crying test – BBA	BS EN T164176	Pass (170 days at Temp 30°C Humidity 94%)	
Mould growth	MOAT 33	Zero growth in 42 days incubation	
Structural Performance	BS EN 1195:1998	Characteristic Point Load (Q <sub>k</sub> ) = 2.89 kN for supports @ 600mm c/c	
Field of use	BS EN 1991:2002	Category A buildings for supports @ 600mm c/c	
Bending Test	BS EN 310:1993	As per shown in below table	
	Orientation	Mean Modulus of Elasticity (N/mm <sup>2</sup> )	Mean Bending Strength (N/mm <sup>2</sup> )
	Fibrous face, Length	4350	8.97
	Fibrous face, Width	5440	4.53
	Non-fibrous face, Length	6660	11.2
	Non-fibrous face, Width	4630	11.8