



Okaply's Magonite is a Magnesium Oxide (MgO) and Magnesium Chloride (MgCl) based construction board that offers a significant improvement over traditional cement based boards and regular gypsum plasterboard. Its fire resistance and exterior and interior applications are just some of the many benefits.

Magonite is easy to cut, saw, nail, stick, paint and veneer.

Magonite panels do not contain any organic solvents, formaldehyde, asbestos, oils or other toxic substances that can have a negative impact on the environment and waterways. Saw dust from Magonite can safely be disposed of in landfills.

Where Magonite excels is through its unrivalled characteristics. On a 7mm metal stud partition system with 75mm thick insulation, a single 10mm Magonite on either side of the metal stud, measuring a total thickness of 90mm, will provide up to 3.5 hours fire resistance and 46 Rw dB. Testing on other single stud and MgO board partitions have provided up to 5 hours fire resistance, making them ideal in multistory buildings such as offices and apartments in escape routes and shaft walls, or dividing walls in commercial units.



PRODUCT FEATURES

Non-flammable: Magonite is non-flammable and conforms to the national grade A1 standard (GB8624 2006 Grade A1). In case of fire, the board will not burn and not give off poisonous smoke.

Water resistant and not affected by moisture: The product allows for long-term exposure to a moist environment. Test results prove that after this material has been immersed in water for one month, it keeps its original shape without deformation or expansion and its dry-wet deforming ratio is 0%. It will not swell, delaminate, warp, or disintegrate when exposed to a wet environment. Remarkably, it is also water vapor permeable and this allows the board to be used as a wall-board in construction where breathable walls are specified.

Naturally mold and mildew resistant: Magonite provides protection against insects, fungus and corrosion.

High-Strength and Lightweight: As its density is not relatively high, the board can be classified as light weight compared to other products attempting to achieve the same weight to strength ratio and as such it can greatly decrease the weight of a building. At the same time, the material is high-strength and not easily damaged.

Ease of use/application: Magonite is easy to cut, saw nail, stick. It has a smooth finish on one side that can be taped and jointed ready for decoration including: overlay, wallpapering, painting, texture coat and veneer. The other side is uniform sand-textured ideal for tile backing.

Environment: Magonite does not contain any organic solvents, formaldehyde, asbestos, oils or other toxic substances that can have a negative impact on the environment and waterways. As such, sawdust from Magonite can safely be disposed of in landfills. Off-cuts of Magonite can be reground and reused back at the production factory. It is a better environmental alternative that replaces gypsum drywall and cement backer boards for walls, floors and counter tops.

Plywood substitution, particle board substitution and MDF substitution

TECHNICAL DATA		
Testing Item	Data	Basis
Apparent density	0.85 - 1.5 t/m ³	JC688-206
Moisture Content	≤ 8 %	JC688-206
Percentage of dry shrinkage	≤ 0.3 %	JC688-206
Percentage of water swelling	≤ 0.6 %	JC688-206
Screw withdrawal force	≥ 70 N/mm	JC688-206
Dehalogenation resistance	No water and no moisture created	JC688-206
Content of chloride ion	≤ 10 %	JC688-206
Fireproof performance	A1 Non- flammability	GB862-2006
Fire resistant time	> 2 h	A 90 mm-thick partition with 6 mm MgO board on both sides of steel
Fire resistant time	> 4 h	A 90 mm-thick partition with 12 mm MgO board on both sides of steel
Sound insulation	> 42 dB	9 mm MGO board + 75 keel + 50 rockwool
Bending strength	> 16 MPa	9 mm
Impacting strength	> 5.5 Kj/m ²	9 mm
Environment	No radiation, no asbestos, formaldehyde free	GB656-2001
Water permeability	No moisture or water	CECS95: 97
Alkali resistance		CECS95: 97
Thermal conductivity	0.109	Average Temperature: 30 ± 5oC (Kcal/moch)
Color	Slate grey ad chalk white	
Surface texture	Smooth one side; uniform machine textures back	

TESTING TECHNIQUES FOR SMOKE TOXICITY

The safety standard AQ1 according to G B/T 20285-2006

N°	Testing Item	Testing Method	Standard Index	Testing Result	Conclusion
1	Smoke Toxicity mg/L	GB/T 20285-2006	AQ1 \geq 100	100 % pass	Pass

TESTING TECHNIQUES FOR FIREPROOF PERFORMANCE

Grade A1 according to GB8624-2006

Items	Testing Methods	Targets	Result
Furnace temperature rising	GB/T 5464-1999	\leq 30.0	3°C
Continuous burning time	GB/T 5464-1999	\leq 50.0	0
Mj/kg	GB/T 14402-93	\leq 2.0	0.1

BS 476 part 4: 1970 – Non-combustibility test for materials
European Norm EN13501 – 1 : 2007 A1

HANDLING

During loading,unloading,or on-site handling, individual sheets should be handled lightly and with care to avoid damage to the edges and surfaces.

Stacks should be moved by forklift with the necessary load limit criteria met.

Excessive or unnecessary bending of sheets should be avoided to prevent possible damage.

Handling of single sheets should be undertaken by two persons and held upright with the longest edge of the sheet parallel to the ground. Handling by a single person is not recommended.

STORAGE

Preferably Magonite should be stored indoors and direct exposure to rain avoided.Magonite has undergone a thorough drying process prior to factory loading.

If stored outdoors Magonite stacks should be covered by an oilskin or similar impenetrable waterproof covering. Magonite should also not be laid directly on the ground when storing; a minimum block height of 100mm from the ground is recommended.

Magonite should be kept on a dry and flat surface and a clear area kept around the stack to avoid any potential damage.

Magonite should not be stacked upright,but rather,laid flat.

The maximum height of each stack is approximately 800mm.

CUTTING

1 Positioning the cutting station so that wind will blow dust away from user or others in working area and allow for ample dust dissipation.

2 Use one of the following methods based on the required cutting rate and jobsite conditions:

Best	Better	Good (for low to moderate cutting only)
<ul style="list-style-type: none"> Score and snap using carbide-tipped scoring knife or utility knife (Ability to use this method depends on thickness being installed.) Fibre cement board shears (electric or pneumatic). 	<ul style="list-style-type: none"> Dust reducing circular saw equipped with appropriate blade and HEPA vacuum extraction. 	<ul style="list-style-type: none"> Dust reducing circular saw with appropriate saw blade. Always use correct tools when executing all cutting operations.

VENTILATION

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limit.

RESPIRATORY PROTECTION

Dust mask is recommended.

EYE PROTECTION

When cutting material, dust resistant safety goggles / glasses should be worn and used.

SKIN PROTECTION

Loose comfortable clothing should be worn. This product recommends that direct skin contact with dust and debris be avoided when possible by wearing long sleeved shirts and long trousers, a cap or hat, and gloves.

SANDING / DRILLING / OTHER MACHINING:

If sanding, drilling, or other machining is conducted, wear a NIOSH-approved dust mask.

IMPORTANT NOTES

- For maximum protection (lowest respirable dust production), always using “Best” level cutting methods where feasible.
- Always use a circular saw blade that is appropriate for the specific operation being undertaken.
- Dry sweeping is not the preferred clean up method.
- It is not recommended that a grinder or continuous rim diamond blade be used for cutting.
- Always follow tool manufacturer’s safety recommendations.