

Jindao® Fiber Cement Board

10 POINT SUPERIORITY

1. Fire Resistant

Jindao Fiber Cement Board passes the following fire performance tests:

Ignitability Test:

- BS 476 Part 5 designaed "P" (Pass)

Fire propagation Test

- BS 476 part 6

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Surface Spread of Flame

- BS 476 parts 7. Rated as a class '1' surface, the highest rating.

Classified as a class '0' material under U.K. Building Regulations,

Jindao Fiber Cement Board can be used for the construction of fire resisting building elements to satisfy the criteria of BS 476 Part 22:1987 (For 1/2 Hr., 1Hr., and 2Hr. Fire Rating).

2. Weather resistant

Jindao Fiber Cement Board has been subjected to many cycles of soaking, freezing and heating without any sign of disintegration.

The board passes the conditioning test V313 carried out by the United Kingdom Building Research Establishment i.e. Clause A 9.2 of BS5669: 1979. It also passed durability test as per clause 16-1 of BS5669: Ptl: 1989.

Jindao Fiber Cement Board should generally be coated for external applications to provide a weather seal.

3. Termite resistant

Insects: **Jindao Fiber Cement Board** is resistant to termite and vermin attack..

4. Fungus resistant

Fungus Growth: long term tests have shown that the board will not support fungus growth..

5. Sound insulation

Average insulation for the frequency range: 100-3150 Hz for total **Jindao Fiber Cement Board** thickness:

12mm 25dB

16mm	25dB
18mm	25dB
25.5mm	25dB
27.5mm	25dB
38mm	25dB

6. Wood workability

Jindao Fiber Cement Board can be drilled, sawn and sanded with normal wood working machinery.

Cutting: **Jindao Fiber Cement Board** should be cut with tungsten carbide tipped circular saws.

Drilling: Use high speed steel (HSS) drill bits.

Fixing: **Jindao Fiber Cement Board** can be fixed using screws, nails, staples, construction fasteners or adhesives. With normal woodscrews the boards should be predrilled with a slightly oversized hole.

Jindao Fiber Cement Board over 10mm thick, a hole slightly smaller than the nail shank should be predrilled.

7. Structurally strong

Modulus of elasticity:	4500	N/mm ²
Bending strength:	9.0	N/mm ²
Shear strength:	3.5	N/mm ²
Tensile strength, in Plane:	5.0	N/mm ²
Compressive strength, in Plane:	15.0	N/mm ²
Transverse tensile strength:	0.5	N/mm ²

8. Dimensionally stable

Moisture movement: **Jindao Fiber Cement Board** shows a change in dimension of 2 mm/m for each change of 10% in board moisture content.

Thickness Swelling: (full immersion in water).

After 2 hours	-1%
After 24 hours	-1.5%
Max. long term	-2.0%

9. Smooth surface

Jindao Fiber Cement Board has a smooth surface, which can be coated with minimum preparation. Alkali compatible can be applied directly onto the board. For other paint types on alkali resisting primer should first be applied.

Jindao Fiber Cement Board can also be finished with tiles, laminates and foils to give a wide range of finishes.

10. Chemically stable

Jindao Fiber Cement Board is produced by an irreversible process combining cement and wood particles into a chemically stable building material product line.

SPECIFICATIONS

DIMENSIONS & WEIGHT						
Standard Board Thickness (mm)	12	16	18	25.5	27.5	38
Approx. weight (kg/m ²)	15.6	20.8	23.4	33.2	35.8	49.4
STANDARD BOARD SIZE	1220 x 3150 mm					
DIMENSIONAL TOLERANCES						
Length	± 4.0mm					
Width	± 3.0mm					
Thickness (unsanded) up to 16mm	± 1.0mm					
Thickness (unsanded) over 16mm	± 1.3mm					
Thickness (sanded)	± 0.4mm					

NOMINAL DENSITY kg/m ³	1250
BENDING STRENGTH N/mm ² (min)	9.0
MODULUS OF ELASTICITY N/mm ² (min)	4500
TENSILE STRENGTH PERPENDICULAR TO SURFACE N/mm ²	0.5

PROPERTIES	TYPICAL VALUES
Moisture content at 65% Relative Humidity	12% ± 3%
Moisture Absorption (After 24 Hr. Soaking)	< 30%
Surface Alkalinity	pH = 12
Coefficient of Thermal Expansion ie. for each 10°C change in temperature	10 ⁻⁵ /°C ±0.1 mm/m
Thermal Conductivity, 'K' value	0.26 w/m °C
Thickness Swelling after soaking for 24 hours (%)	< 1.8 %
Fire Rating	Class 'O' UK Building Regulation
Weathering - 3 Cycles soaking Freezing and Heating to 70°C - BS 5669: Pt 4	Passes Unaffected
Insect Attack(Termites)	Highly Resistant
Fungal Attack	Highly Resistant
Impact Strength	> 20 mm / mm

MATERIAL SAFETY DATA SHEET

Product	<i>Fiber Cement Board</i>		
SECTION 1: PRODUCT IDENTIFICATION AND USE			
Brand Name	<i>JINDAO</i>	Product Use: <i>Building Construction</i>	
Manufacturer/Supplier	<i>JINDAO FLOORS, INC.</i> <i>ADDRESS: Xiyou Town Government, Laizhou City, Shandong Province, China 261418</i> <i>TEL: +86-535-274-3446</i> <i>FAX: +86-535-274-3449</i> <i>URL: http://www.jindaofloors.com/</i>		
SECTION 2: HAZARDOUS INGREDIENTS IN DUST FROM PRODUCT			
Hazardous Ingredients:	CAS Number	Exposure limit	Limit basis
<i>Wood Particle</i>	N/Avail	<i>5mg/m³</i>	
<i>Cured cement solids</i>	N/Avail	<i>10mg/m³</i>	
SECTION 3: PHYSICAL CHARACTERISTICS			
Appearance	<i>Gray to dull yellow mixture of cured cement and wood fibers</i>		
Odor	<i>Slight cement/wood odor</i>		
Normal physical state	<i>Solid</i>	Boiling Point	<i>Not Applicable</i>
Freezing point	<i>Not Applicable</i>	Odor Threshold	<i>Not Applicable</i>
Vapor Pressure (mm Hg)	<i>Not Applicable</i>	Percent Volatile	<i>Not Volatile</i>
Vapor Density (g/cm ³)	<i>Not Applicable</i>	Evaporation Rate	<i>Not Applicable</i>
PH	<i>12</i>	Percent Soluble	<i>None</i>
Specific Gravity	<i>1.25</i>		
SECTION 4: FIRE AND EXPLOSION DATA			
Flammability	<i>Will not burn</i>	Extinguishing Media	<i>Not Applicable</i>
Special Fighting Procedures	<i>None</i>	Unusual Fire and Explosion Hazards	<i>None</i>
Flashpoint(°C)and Method	<i>Not Applicable</i>	Auto-ignition Temperature	<i>Not Applicable</i>
Upper Flammability Limit (% Vol)	<i>Not Applicable</i>	Lower Flammability Limit (% Vol)	<i>Not Applicable</i>
Hazardous Combustion Products	<i>Not Applicable</i>	Explosion - Sensitivity to Impact	<i>Not Applicable</i>
Explosion-Sensitivity to Static Discharge	<i>Not Applicable</i>		

SECTION 5: REACTIVITY DATA			
Chemically Stable	Yes	Incompatibilities With Other Substances	Cement Will Dissolve In Strong Acidic Solutions
Other Reactivity Concerns	None Known	Hazardous Polymerization	Will not occur
Hazardous Decomposition Products	Stable		
Routes of Entry:			
Inhalation: Yes	Ingestion: No	Eye Contact: Yes	Skin Absorption: No Skin Contact: Yes
Medical Conditions Aggravated By Exposures	Exposure to dust can temporarily Worsen existing respiratory ailments, including bronchitis and asthma.		
Carcinogenicity	NTP: NO	IARC: NO	OSHA CONTROLLED: NO
SECTION 6: TOXICOLOGY DATA			
Synergistic Materials	None Known	Mutagenicity:	Not known to be mutagenic
Teratogenicity:	Not known to be teratogenic	Reproductive	Not known to have reproductive effects
Acute Exposures:			
EYES	Dust can physically irritate eyes and may cause abrasions.		
SKIN	Dust can physically irritate the skin.		
RESPIRATORY TRACT	Dust can physically irritate the nose, throat and lungs, resulting in a runny nose and dry cough. People with bronchitis or other existing respiratory tract ailments may experience difficulty in breathing if exposed to dust.		
Chronic Exposure:			
EYES	Dust can physically irritate eyes and may cause abrasions.		
SKIN	Some individuals may develop irritant dermatitis from prolonged dust exposures.		
RESPIRATORY TRACT	Exposure to dust will increase the risk of bronchitis, and people with existing respiratory tract ailments (e.g. bronchitis) may suffer severe irritation and difficulty in breathing.		
SECTION 7: EXPOSURE CONTROL METHODS:			
Personal Protective Equipment			
EYES	Suitable eye protection should always be worn whenever cutting or shaping products with power tools		
RESPIRATOR	As required to maintain dust exposures below allowable limits		
CLOTHING	Normal work clothing.		
GLOVES	As required to avoid irritation from solid product or dust.		
FOOTWEAR	As determined by normal job requirements.		
Engineering Controls	Provide exhaust ventilation where practicable to maintain exposures below permissible exposure limits.		

Handling procedures and Equipment	<i>Prevent dust from becoming airborne</i>	Storage Requirement	No special requirements
Waste Disposal	<i>As determined by environmental Regulations. Normally can be disposed off as solid waste</i>	Special Shipping Information	None
Spill and leak Procedures	<i>Dust should be cleaned up by any method that does not create a dust cloud.</i>		

SECTION 8: FIRST AID MEASURES

Eyes	<i>Flush with water for several minutes. If irritation persists, seek medical aid.</i>
Inhalation	<i>Remove to fresh air if any respiratory irritation develops, and seek medical aid promptly if the irritation persists. If breathing difficulties occur, provide artificial respiration until medical aid arrives.</i>
Skin Contact	<i>Seek medical aid if any skin irritation develops.</i>

The information and data in this MSDS are believed to be accurate and have been compiled from sources believed to be reliable.