

## 6. BS 476-4:1970+AMD2483&4390

### I . Test Conducted

This test was performed in accordance with BS 476 Part 4:1970 Incorporating AMD 2483 and AMD 4390.

Fire tests on building materials and structures-Part 4:Non-combustibility test for materials.

### II . Sample Details

Description	NON-ASBESTOS FIBER CEMENT
Color	Grey
Thickness	About 11.5mm
Specimen size	40mx40mm47mm

#### Conditioning

Prior to testing, the specimens were dried in a ventilated oven at  $60\pm 5^{\circ}\text{C}$  for not less than 24h then cooled to ambient temperature in a desiccator containing anhydrous calcium chloride.

### III . Test Results

Description	Specimen 1	Specimen 2	Specimen 3	Specimen 4
Time of continuous flaming (sec.)	0	0	0	< 10
Temperature rise of furnace above initial furnace temperature ( $^{\circ}\text{C}$ )	41	32	31	< 50
Temperature rise of sample above initial furnace temperature ( $^{\circ}\text{C}$ )	0	0	0	< 50
Classification	Non-Combustible	Non-Combustible	Non-Combustible	-

#### CONCLUSION:

A non-combustibility test for materials in accordance with British Standard 476 Part 4 : 1970 has been performed on the material as described in this report and the classification of the sample is Non-Combustible.



## MULTIPURPOSE CALCIUM SILICATE BOARD

#### RECOMMENDED APPLICATIONS:

EVOLVE MP Calcium Silicate Board is for indoor partition and ceiling. Moisture proof and non combustible performances are suitable in the wet area building for both civil and industrial application. It is widely used in office building, hotel, hospital, factory, school, villa, coffee shop and other kinds of art building.

- Environment Friendly
- Non-combustible
- Anti-corrosion
- Resistant To Insect and Termite
- Light Weight & High Strength
- Easy Working
- Easy Decoration
- Small Deformation Coefficient

#### PRODUCTION:

The raw material of EVOLVE MP Calcium Silicate Board is high-purity quartz flour, high-graded Portland cement, high-purity slaked lime, plant fiber and other mineral additive substances. After agitating and mixing calcium and silicate in a ratio, we then make the material into a wet sheet and through 24 hours of high temperature autoclave by advanced technology to make the calcium silicate react to Tobermorite to get the final product. From opening the raw material to processing semi-finished product, every procedure is under strict control to guarantee our high quality calcium silicate board.

#### STANDARD:

EVOLVE MP Calcium Silicate Board meets the test accordance with British Standard 476 Part 4 : 1970. Our company has a strict product quality control to examine our product standard.



**SPECIFICATION:**

Thickness (mm)	Width (mm)	Length (mm)
6, 9, 12, 15	1220	2400, 3000, 3660
REMARK: We can also supply other specification according to the client's requirements		

**TOLERANCE DIMENSION:**

Item	Requirement	
Length (L)	< 1200	± 3
	1200 - 2400	± 4
	> 2400	± 5
Width (B)	≤ 1200	± 3
	>1200	± 4
Thickness (e)	< 8	± 0.3
	≥ 9	± 0.5

**TOLERANCE IN SHAPE:**

Item	Requirement
mm/m Edge straightness	≤ 2
mm/m Squareness	≤ 3
mm/m Squareness	≥ 4
% Thickness Uneven	≥ 6

**PHYSICAL PROPERTIES:**

Item	Unit	Requirement	
Density	g/cm <sup>3</sup>	≥ 1.2	
Thermal conductivity	W/(m.k)	≤ 0.29	
Water absorption	%	≤ 40	
Water contain	%	≤ 10	
Moisture movement	%	≤ 0.25	
Non-combustibility	Gb8624 class A		
Bending strength	Oven dry		
	Cross	Mpa	≥ 1.2
	Parallel	Mpa	≥ 9
REMARK: Please contact our technical if you need more technical index or products info.			

Lab environmental condition: 23±2°C, 50±5%RH

**Test results:**

**1. DENSITY**

Test item	Test method	Test result
Density(kg/m <sup>3</sup> )	ASTM C 1185-08(R2012)	1.39X10 <sup>3</sup>
REMARK	Specimen dimensions: 305mmx152mmx12mm,3pcs	

**2. FLEXURAL STRENGTH (WET CONDITIONING)**

Test item	Test method	Test result
Flexural strength (MPa)	ASTM C 1185-08(R2012)	Ave.: 10.5 Min.: 10.0
REMARK	Specimen dimensions: 305mmx152mmx12mmx12mm, 5pcs in each direction. Test span: 254mm. Test Speed: 2mm/min	

**3. WATER ABSORPTION**

Test item	Test method	Test result
Water absorption(%)	ASTM C 1185-08(R2012)	30.7
REMARK	Specimen dimensions: 100mmx100mmx12mm,5pcs	

**4. MOISTRE CONTENT**

Test item	Test method	Test result
Moisture content(%)	ASTM C 1185-08(R2012)	7.3
REMARK	Specimen dimensions: 305mmx152mmx12mm,1pcs	

**5. FREEZE-THAW**

Test item	Test method	Test result
Flexural strength (MPa)	ASTM C 1185-08(R2012)	R=0.93
REMARK	Specimen dimensions: 305mmx152mmx12mmx12mm, 5pcs in each direction. Test span: 254mm. Test Speed: 2mm/min Total number of freeze/thaw cycles: 4 cycles	