

# SCG Smartboard Ceiling

**Fiber Cement Board**  
**Non Asbestos**

**FIRM FLEX**  
TECHNOLOGY



## SCG Smartboard

is a new generation of fiber cement material with **FIRM & FLEX** Technology made the board gain strength, durability and elasticity in one time. SCG Smartboard, with state-of-the-art composition of Elephant (SCG) Portland Cement, Silica and Special cellulose fiber through Autoclave process, is specifically designed for various ceiling, wall and flooring applications both internal and external usage.



### Special Properties

<b>FIRM</b>	<b>High impact strength</b>	High impact strength from state-of-the-art composition of Elephant (SCG) Portland Cement, Silica and Special cellulose developed by our laboratory.
	<b>Water-Resistance and Non-decay</b>	Long lasting even using in hot, humid, and strong raining weather condition according to JIS Standard A5420.
	<b>Termite Resistance</b>	Termite resistance from Portland cement material.
<b>FLEX</b>	<b>Flexibility for various designs</b>	<p>Bendable. No water is needed to applied while bending the board.</p>
	<b>Light weight, fast and easy to install</b>	With only 30 kg. per sq.m. total weight of internal partition and faster installation than conventional system, it provides flexibility of designs and durability of applications better than conventional systems.
	<b>Better heat resistance</b>	With specially low heat conductivity compared to typical light-weight ceiling and wall material, SCG Smartboard is the ideal material for preventing heat from external environment, reducing energy consumption and answering green designs.

### Specification and Standard

Attributes	Test value	Standard
Water expansion rate (24 hrs. soak)	0.12%	JIS A 5420
Density	1,260 Kg./M <sup>3</sup>	ASTM C 1185
Resistant to leakage (24 hrs. water contain)	Pass	TIS 1427-2540
Water absorption rate	34%	-
Tension force perpendicular to the surface	1.0 MPa	JIS A 5905
Modulus of Rapture (Wet Test)	10 N/Sq.mm.	ASTM C 1185
Heat Conductivity rate (K)	0.084 W / M <sup>2</sup> c	ASTM C 117
1 Sound Resistant (STC)	38 dB	BS 2750
Non Flamable, Non combustible	Pass	BS 476 Part 5,6 and 7
2 System flame resistant	1 and 2 hrs.	BS 476 Part 20-22
Drying Shrinkage rate (60°C, 24 hrs.)	0.04%	-
Modulus of Elasticity	4,500 N/Sq.mm.	ASTM C 1185
Bending Radius (4, 6, 8, 10 mm.)	1.0, 1.5, 2.0, 4.0 M.	-

**Remark :** 1. When installing 8 mm, SCG Smartboard with light-weight-wall galvanized studs with no sound insulation  
2. When installed with Rockwool fire-insulation

## Choosing SCG Smartboard 4 mm. to match your ceiling application

Application	Thickness (mm.)	Width x Length (mm.)	Installation system	Weight (kg./pc.)	Effective Area (sq.m./pc.)	Series
Internal and External Ceiling	4	600 x 1200	T-Bar Space lining No space lining	4.4	0.72	<u>Squared Edge</u> 
		600 x 2400		8.7	1.44	
		1200 x 1200		8.7	1.44	
		1200 x 2400		17.4	2.88	
		610 x 610 (2'x2') <sup>①</sup>		2.3	0.37	
		1220 x 1220 (4'x4') <sup>①</sup>		9.0	1.49	
		1220 x 2400 (4'x8') <sup>①</sup>		18.0	2.97	
	4	600 x 2400		8.7	0.70	<u>Timber</u> 
		1200 x 1200		8.7	0.70	
	4	600 x 1200	Space lining No space lining	5.0	0.72	<u>Wood Grain</u> 
				5.1		<u>3-inch Square Lining</u> 
Ventilated Ceiling	4	600 x 1200	Space lining No space lining	4.2	0.72	<u>Ventilated</u> 
				4.9		<u>Ventilated Wood Grain</u>
				5.1		<u>Ventilated 3-inch Square Lining</u>

① Made to order

## SCG Smartboard Ceiling : mix and match designs for decoration

**SCG Smartboard Ceiling** can be installed with various elegant styles, such as bent ceiling, pocket ceiling or leveling ceiling, space lining ceiling or T-bar, or mixed among various models to enhance elegancy. Down lights can be installed, or painted over by 100% acrylic paint as wished.

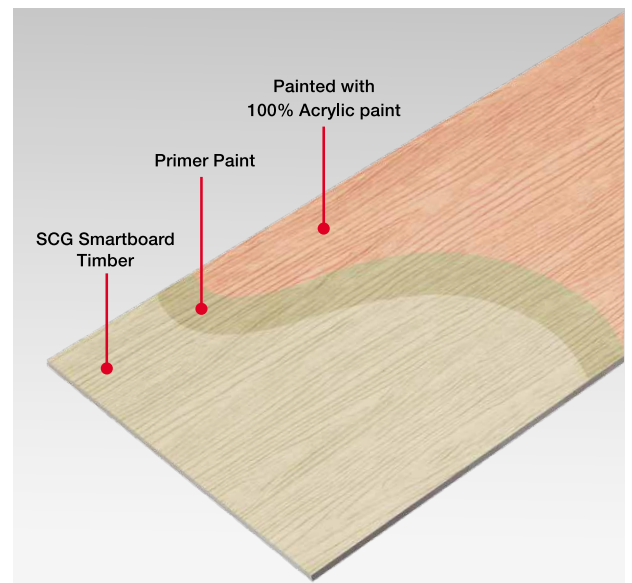
### SCG Smartboard

Timber 4 mm. thick

- **Outstanding with deep wood**  
suitable for natural housing style.
- **Easy and fast installation**  
because of light-weight and various dimension.
- **Uncolor**  
apply 100% Acrylic paint at least 2 times over primer paint.



Both ceiling (internal and external) and wall decoration are applicable



Width (cm.)	Length (cm.)	Thickness (cm.)
60	240	0.4
120	120	0.4
120	240	0.4





#### Internal Ceiling

Using several series of SCG Smartboard to create interesting perspective for your ceiling in your house.



#### Internal Space No Lining Ceiling

Using SCG Smartboard Wood Grain 4 mm, thick to create natural style.



#### Internal Space Lining Ceiling

Using SCG Smartboard Squared Edge 4 mm, thick.



#### Internal Ceiling

Using several series of SCG Smartboard to make your ceiling fabulous.

## SCG Smartboard with Ventilated drills for ventilation ceiling application

### Cool House System

Hot air escaping through roofing ridge joint gap.

Temperature in the roof air gap increases in the afternoon.

#### ① External Ceiling

Cool air passing through SCG Smartboard's ventilated holes to replace hot air under roof.

#### ④ Internal Ceiling

Using SCG Smartboard to minimize heat transferring from roof air gap.

#### ② External Ceiling

Hot air circulated out from SCG Smartboard's ventilated holes.

- ① Cool air from outside flows through the **SCG Smartboard's** ventilated drills to replace hot air under roof.
- ② Hot air is pushed from air pressure out via the **SCG Smartboard's** ventilated drills on the other side. This will help to reduce the air temperature under the roof.
- ③ When the temperature in the roof air gap is lower, less heat can pass through the living area.
- ④ Double your heat protection by using **SCG Smartboard** for your internal ceiling because it has low k (heat conductivity rate) to minimize heat transferring from roof air gap in the living area.

### SCG Smartboard Ceiling with ventilation drills

This is the ceiling with the factory-made drilled holes suitable for eaves ceiling application because it can endure the water or moisture. Three types of ventilated SCG Smartboard are profiled ventilated, ventilated wood grain, and ventilated 3-inch lining.



**External Ceiling**

Using SCG Smartboard Ventilated 4 mm, thick.



**External Ceiling**

Using SCG Smartboard Ventilated Wood Grain 4 mm, thick.

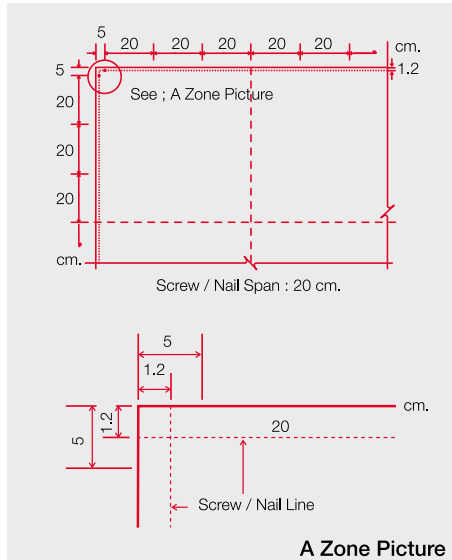


**External terrace ceiling**

Using SCG Smartboard Wood Grain / Ventilated Wood Grain 4 mm, thick.

## Fixing a nail or screw on SCG Smartboard

1. Fix on SCG Smartboard every 20 cm. and away from the edge 1.2 cm. with nail or screw.
2. Wooden Studs ; use hammer to nail down. Steel Studs ; use electric drill not more than 2500 rpm. to drill the SCG screw down.



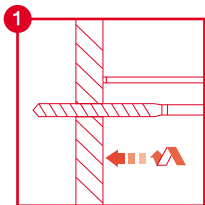
## Installing SCG Smartboard Ceiling and Wall

Product	Thickness (mm.)	Installation type	Joining Accessory	Fixing Accessory
<b>Internal / External Ceiling</b>				
Lite	3.2 - 3.5	SCG Smartboard Polyurethane joint sealant	Fix with 1.5 x 3.0 inch wooden studs. With maximum stud span of 60 cm.	1, 1.5 inch Wood nail
Squared Edge	4.0			
Ventilated	4.0			
Wood Grain	4.0			
Ventilated Wood Grain	4.0			
3-inch Square Lining	4.0			
Ventilated 3-inch Square Lining	4.0			
Squared Edge	6.0			
<b>Internal Wall</b>				
Squared Edge	8.0 - 12.0	SCG Smartboard Plaster Joint Compound	Fix with 0.55 mm. thick SCG Smartboard C 74, U 76 Galvanize Frame without pre-drilling with the maximum stud span of 60 cm.	SCG Needle Point Screw 23 mm. (Counter sunk head)
4-inch Square Lining	8.0			
6-inch Square Lining Wood Grain with Golden Teak Color	8.0			
<b>Internal Wall</b>				
Tapered Edge	8.0			
<b>External Wall</b>				
Squared Edge	8.0 - 16.0	SCG Smartboard Polyurethane joint sealant	Fix with 1.2 - 3.2 mm. steel studs (C 75) without pre-drilling with the maximum stud span of 60 cm.	SCG Self Drilling Wing Screw 32 mm. (Counter sunk head)
6-inch Square Lining Wood Grain with Golden Teak Color	8.0			
<b>Floor</b>				
Squared Edge	16.0	SCG Grumcrete	Fix with 1.2 - 3.2 mm. steel studs without pre-drilling with the maximum stud span of 60 cm.	SCG Self Drilling Screw 45 mm. (Counter sunk head)
	18.0			

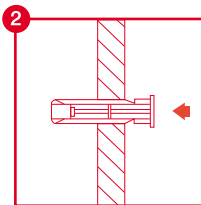
\*Please study SCG Smartboard Installation manual for more information.

## Hanging Objects on SCG Smartboard Ceiling and Wall

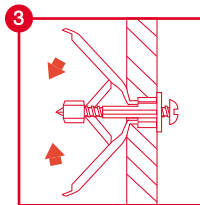
Can be easily done by sinking butterfly-wing plastic hook in the ceiling or wall in the point that you wish to hang your object, simply follow these steps



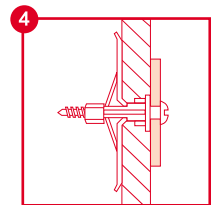
Mark and Drill your desire point



Sunk butterfly-wing plastic hook into the ceiling or wall hole



Drill the screw into the butterfly-wing plastic hook



When the screw is completely installed the butterfly-wing will be tightly fix with the SCG Smartboard

### Recommendations

1. Use the table below to estimate the weight bearing level of different thickness and usage of SCG Smartboard.
2. When hanging heavy weight objects, it is advised to fix your object in the position that is on the studs, the maximum weight stand will also vary depending on the strength of different studs.

Product	Application	Accessory	Maximum Weight Stand (kg.)
SCG Smartboard 3.5 mm. thick	Ceiling	butterfly-wing plastic hook PT - 5 with drilling screw	5
SCG Smartboard 4 mm. thick	Ceiling	butterfly-wing plastic hook PT - 5 with drilling screw	7
SCG Smartboard 6 mm. thick	Ceiling	butterfly-wing plastic hook PT - 13 with drilling screw	10
SCG Smartboard 8 mm. thick	Wall	butterfly -wing steel hook PT - 13 with drilling screw	80

### Painting

Chose your own color shade

1. Use old cement primer paint to increase the life time your finishing paint.
2. Use 100 % Acrylic paint 1 - 2 times for complete cover up of the original surface color. (the durability of the paint depends on the quality of your chosen paint)

### Cautions

- Recommended for ceiling, wall, floor, backer and underlay board only. Do not use as any building's structure or other purposes. The installation shall follow the Installation Manual and use only the standard equipment.
- Eating, intaking and inhaling of the dust that results from drilling, grinding, shearing, washing the materials are prohibited.

### Concerned Points

- The Products of SCG Smartboard are designed, while the operation methods are specified to suit with the working condition in Thailand only. Any application outside Thailand is considered to be direct responsibility of the designer, construction supervisor, and installer.
- Installation Manual of Products is always updated. The designer, construction supervisor, and installer shall verify that all methods being used are following the most update of Installation Manual of Products.