Ceiling Wall Floor
SCG Smart**BOARD**

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.

Elephant (SCG) Portland Cement

Special cellulose fiber
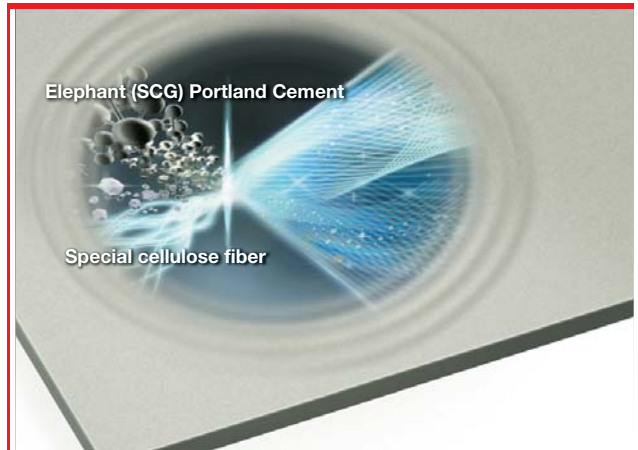
FIRM & FLEX Technology   High molecular bonding strength from the special material composition.

Special Properties

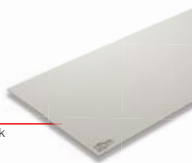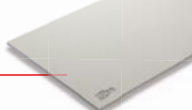|		
FIRM	**High impact strength**	High impact strength from state-of-the-art composition of Elephant (SCG) Portland Cement, Silica and Special cellulose developed by our laboratory.
	Water-Resistance and Non-decay	Long lasting even using in hot, humid, and strong raining weather condition according to JIS Standard A5420.
	Termite Resistance	Termite resistance from Portland cement material.
FLEX	**Flexibility for various designs**	Bendable. No water is needed to applied while bending the board. R = 1.0 m / 4 mm. 1 m. bending radius · R = 1.5 m / 6 mm. 1.50 m. bending radius · R = 2.0 m / 8 mm. 2.0 m. bending radius · R = 4.0 m / 10 mm. 4.0 m. bending radius
	Light weight, fast and easy to install	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.
	Better heat resistance	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^3	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 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 to match your application

Application	Thickness (mm.)	Width x Length (mm.)	Installation system	Weight (kg./pc.)	Effective Area (sq.m./pc.)	Series
Internal and External Ceiling	3.2	603 x 1213 610 x 1220 (2'x4')③ 1220 x 1220 (4'x4')⑤	T-Bar Space lining No space lining	3.6 3.6 7.2	0.73 0.74 1.49	**Squared Edge** 3.2, 3.5 , 4, 6 mm. thick
	3.5	600 x 2400 1200 x 1200 1200 x 2400 603 x 1210 610 x 1220 (2'x4')③ 1220 x 1220 (4'x4')⑤ 1220 x 2400 (4'x8')		7.6 7.6 15.2 3.9 4.0 7.9 15.8	1.44 1.44 2.88 0.73 0.74 1.49 2.97	
	4	600 x 1200 600 x 2400 1200 x 1200 1200 x 2400 610 x 610 (2'x2')③ 1220 x 1220 (4'x4')⑤ 1220 x 2400 (4'x8')⑤		4.4 8.7 8.7 17.4 2.3 9.0 18.0	0.72 1.44 1.44 2.88 0.37 1.49 2.97	
	4.5	1220 x 2400 (4'x8')③		20.2	2.97	
	6	1200 x 2400 1220 x 2440 (4'x8')		26.1 27.0	2.88 2.97	
	4	60 x 120		10.4 10.4 20.8	0.70 0.70 0.35	**Timber** NEW 4 mm. thick
	4	600 x 1200	Space lining No space lining	5.0 5.1	0.72	**Wood Grain** 4 mm. thick **3-inch Square Lining** 4 mm. thick
Ventilated Ceiling	4	600 x 1200	Space lining No space lining	4.2 4.9 5.1	0.72	**Ventilated** 4 mm. thick **Ventilated Wood Grain** 4 mm. thick **Ventilated 3-inch Square Linning** 4 mm. thick
Internal and External Wall	8	1200 x 2800	Concealed	40.2	3.36	**2-side Tapered Edge** 8, 12 mm. thick
	12	1220 x 2440 (4'x8')①①		53.6	2.97	
	8	1200 x 2400 1200 x 2800 1220 x 2440 (4'x8')	Space lining	34.8 40.6 36.0	2.88 3.36 2.97	**Squared Edge** 8, 10, 12 mm. thick
	9	1200 x 2400 1220 x 2440 (4'x8')		39.2 40.4	2.88 2.97	
	10	1200 x 2400 1220 x 2440 (4'x8')		43.5 44.9	2.88 2.97	
	12	1200 x 2400 1220 x 2440 (4'x8')		52.2 53.9	2.88 2.97	
	8	1200 x 2800	Space lining	40.0	3.36	**4-inch Square Lining** 8 mm. thick
	6	600 x 3000②	Space lining No space lining	16.0	1.80	**6-inch Square Lining Wood Grain (Golden Teak Color)** NEW 6, 8 mm. thick
	8	600 x 3000		21.5	1.80	
Underlay	8	1200 x 2400 1200 x 2800 1220 x 2440 (4'x8')	Space lining No space lining	34.8 40.6 36.0	2.88 3.36 2.97	**Squared Edge** 8, 10, 12 mm. thick
	9	1200 x 2400 1220 x 2440 (4'x8')		39.2 40.4	2.88 2.97	
	10	1200 x 2400 1220 x 2440 (4'x8')		43.5 44.9	2.88 2.97	
	12	1200 x 2400 1220 x 2440 (4'x8')		52.2 53.9	2.88 2.97	
Flooring	16	1200 x 2400 1200 x 3000 1220 x 2440 (4'x8')④	No space lining	69.6 87.0 72.0	2.88 3.60 2.97	**Squared Edge** NEW 16,18 mm. thick
	18	1200 x 2400 1220 x 2440 (4'x8')③		78.3 81.0	2.88 2.97	

① Use interior only   ② not recommended for structural materials   ③ Made to order
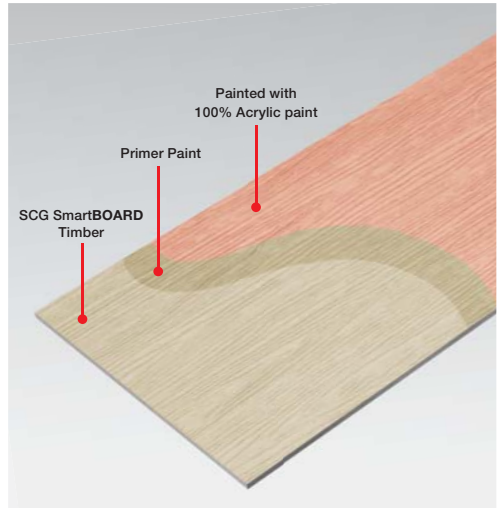
SCG SmartBOARD Ceiling : mix and match designs for decoration

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 verious models to enhance elegancy. Down lights can be installed, or painted over by 100% acrylic paint as wished.

NEW

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.

Painted with 100% Acrylic paint

Primer Paint

SCG Smart**BOARD** Timber

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

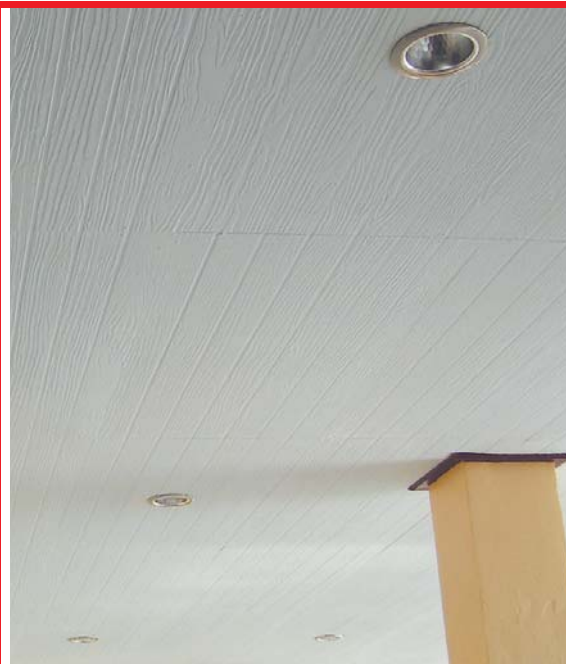| Width (cm.)	Length (cm.)	Thickness (cm.)
60	240	0.4
120	120	0.4
120	240	0.4

Internal Ceiling   Using several series of SCG Smart**BOARD** to create interesting perspective for your ceiling in your house.
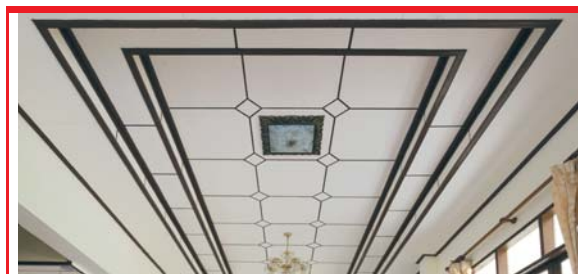
Internal Ceiling Using several series of SCG Smart**BOARD** to make your ceiling fabulous.

Internal Space No Lining Ceiling Using SCG Smart**BOARD** Wood Grain 4 mm. thick to create natural style.

Internal Space Lining Ceiling Using SCG Smart**BOARD** Squared Edge 4 mm. thick.

Internal Space Lining Ceiling Using SCG Smart**BOARD** Squared Edge 4 mm. thick to give outstanding elegant style.

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.

④ Internal Ceiling
Using SCG Smart**BOARD** to minimize heat transfering from roof air gap.

① External Ceiling
Cool air passing through SCG Smart**BOARD**'s ventilated holes to replace hot air under roof.

② External Ceiling
Hot air circulated out from SCG Smart**BOARD**'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 tempurature 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 transfering 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 smart**BOARD** are profiled ventilated, ventilated wood grain, and ventilated 3-inch lining.

External Ceiling Using SCG Smart**BOARD** Ventilated Wood Grain 4 mm. thick.

External Ceiling Using SCG Smart**BOARD** Ventilated 4 mm. thick.

External terrace ceiling Using SCG Smart**BOARD** Wood Grain / Ventilated Wood Grain 4 mm. thick.

SCG SmartBOARD Wall

High impact strength, lasting durability and easy installation

SCG SmartBOARD is the most suitable choice for external and internal wall & partition, especially in the construction of housing extended or renovated area

- **High impact strength and lasting durability :** with maximum hanging weight up to 80 kg. each point and resist to moisture or even heat and rain in case of external usage.
- **Easy and fast installation :** with the light-weight system at only 30 kg./sq.m. and no supported concrete beam required, SCG Smart**BOARD** system helps reduce all of construction time, materials and labor costs.
- **Neat finishing :** using dry-system of installation, all parts are able to be finished neatly and nicely.

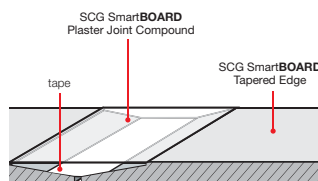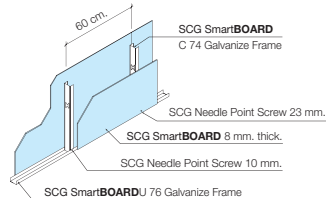| **External Wall** | Using SCG Smart**BOARD** Squared Edge 8 - 18 mm. thick or 4-inch Square Lining 4 mm. thick to create space lining wall. |

External Wall   Using SCG Smart**BOARD** 4-inch Square Lining 8 mm. thick.

| **Internal Wall** | Using SCG Smart**BOARD** Tapered Edge 8, 12 mm. thick to create concealed look for your wall. |

before

After

Internal Wall Using SCG Smart**BOARD** Tapered Edge 8 mm. thick

Using SCG SmartBOARD, easy to install without any floor beam reinforcement

60 cm.

SCG Smart**BOARD** C 74 Galvanize Frame

SCG Needle Point Screw 23 mm.

SCG Smart**BOARD** 8 mm. thick.

SCG Needle Point Screw 10 mm.

SCG Smart**BOARD** U 76 Galvanize Frame

SCG Smart**BOARD** Plaster Joint Compound

tape

SCG Smart**BOARD** Tapered Edge

Smooth-plastered Wall

Uses the SCG SmartBOARD Plaster Joint Compound which is viscous plaster, easy to mix.

Remark : Please refer to the most updated Installation Manual prior use.

FIRM FLEX TECHNOLOGY

NEW

SCG SmartBOARD
6-inch Square Lining Wood Grain with
Golden Teak Color 6, 8 mm. thick

- **Elegance by natural teak style, with 6" spacing grooves**
  after complete the installation, it will be similar to panel-hidden wooden wall,
  can be used in either interior or exterior.

- **Time saving, and Reducing the installation cost,**
  with bigger panel size of 60 cm width, and 300 cm length, so it provides fast
  installation, without additional cost for color painting.

- **Tough, Endure, inedible by termites,**
  because made from Elephant (SCG) Portland Cement mixed by the cellulose
  fiber, and passing the process of vaporization using higher temperature and
  pressure, not shrinkage and rotting.

Golden Teak Color
Prime Coat
Special cellulose fiber
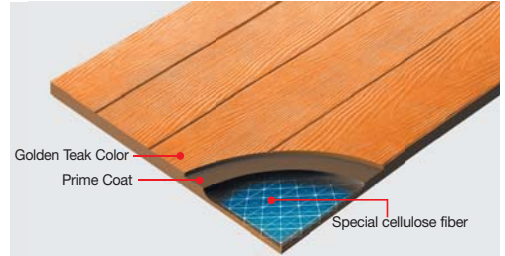
High Quality 2-layer coating finished from the factory -made

Width (cm.)	Length (cm.)	Thickness (cm.)
60	300	0.6*
60	300	0.8

Not recommended for structural materials

Decoration by covering the surface of SCG SmartBOARD

Internal Wall Using SCG Smart**BOARD** Tapered Edge 8 mm. thick
painted with 100% Acrylic paint.

Internal Wall Using SCG Smart**BOARD** Squared Edge 10 mm. thick
installed with ceramic tiles.

SCG SmartBOARD Wall, can be used either interior or exterior

External Cladding Metro Park Condominiumtown, Bangkok

Creating space lining by using SCG Smart**BOARD** Squared Edge 8 mm. thick.

External Cladding Phenix pulp and paper plant, Khonkaen

Creating space lining by using SCG Smart**BOARD** Squared Edge 10 mm. thick.

Internal Wall SCG Experience, Bangkok

Using SCG Smart**BOARD** Squared Edge 8 mm. thick plastered with plastering cement, make 1 - 3 cm. skim coat.

External Fence Picasus narcissus, Bangkok

Using SCG Smart**BOARD** Squared Edge 8 mm. thick make the groove spacing fence decorated by make beautiful hole drilling.
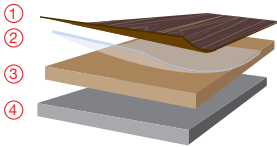

Internal Wall Luxor Hotel, Bangkok

Using SCG Smart**BOARD** Squared Edge 8 mm. thick make the lighting pocket on bed's head.
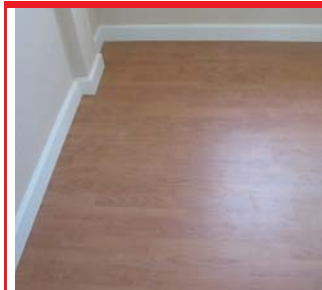
SCG SmartBOARD Flooring and Underlay

SCG SmartBOARD Underlay

Using **SCG SmartBOARD** 8, 10 and 12 mm. thick to be installed as **floor underlay** for laminate, parquet, or rubber floor tiles.
- **Replacement of polished cement** reduce the construction time from 3 weeks to 3 days.
- **Replacement of Plywood** which costly but low quality.

Using **SCG SmartBOARD** 8, 10 and 12 mm. thick to be installed as **sub roof** to prevent the leakage due to external water flow, in either.
- Shingle roof of wooden type.
- Concrete roof such as kite tile, etc.

① ② ③ ④

1. Laminate, parquet, rubber tile floor
2. Foam panel
3. **SCG SmartBOARD**
4. Lean Cement

Floor Underlay — Using SCG Smart**BOARD** Squared Edge 8 mm. thick.

Sub Roof — Using SCG Smart**BOARD** Squared Edge 8 mm. thick.

NEW

SCG SmartBOARD Flooring
Squared Edge 16, 18 mm. thick

SCG SmartBOARD Squared Edge 16, 18 mm. thick

- **Tough and Endure** can support the load up to 500 kg./sq.m.
- **Suitable for**
  - Building work which requires rapidity of construction, such as hotel, resort, restaurant.
  - Rectification or Additional work which is concerning on load, and settlement of foundation.

Product	Thinkness (mm.)	Distance of support (cm.)	Type of building	Live Load (kg./m²)
SCG SmartBOARD Floor	16	40	House / Residence	150
	18	40	Hotel / Dormitory	200
		40	Office / Bank	250
		40	School / University	300
		30	Departmentstore / Cinema / Hall / Restaurant / Carpark	400
		30	Cargo / Museum / Plant / Publisher	500

Remark
- Do not use in the house's floor area which can be wetted or moist, do not use for carrying load higher than 100 kg. per set (area is not less than 10 sq.cm.)
- Please refer to the most updated Installation Manual prior use.

Width (cm.)	Length (cm.)	Thickness (cm.)
120	240	1.6
120	240	1.8

SCG SmartBOARD Flooring, tough and Endure

Building Floor which is decorated by covering with the ceramic tiles

SCG SmartBOARD Equipment for installation

SCG Self Drilling Point Screw 10 mm.

- Used to fix SCG Smart**BOARD** C 74 and U 76 Galvanize Frame, or fix SCG Smart**BOARD** C 74 and C 74 Galvanize Frame in order to make as door or window frames.
- Easily install, can drill and fix firmly with two or three layers of 0.55 mm. thick of steel ceiling frames.
- Endure to the rust or corrosion because the material is made from high-quality steel wires, can be used either external or internal.
- Containing size : 500 pieces / box

SCG Needle Point Screw 23 mm.

- Specially designed to suit with the work operated with Fiber cement material safely, endure, and nice.
- Longer life for rust or corrosion, because the material is made from high-quality steel wires, can be used either external or internal.
- Designed to provide the fin around the screw head which make the screw head fully embedded in the panel automatically resulting nice surface of work.
- Containing size : 500 pieces / box

SCG Self Drilling Wing Screw 32 mm.

- Specially designed to suit with the work operated with Fiber cement material safely, endure, and nice.
- Longer life for rust or corrosion, because the material is made from high-quality steel wires, can be used either external or internal.
- Specially designed to provide special drill end, which will not require advance penetration, easily operated, and can drill rapidly into the steel, its fin can core the panel allowing the screw head to be perfectly and nicely embedded into the panel. The fin will automatically break whenever the steel is eventually penetrated.
- Containing size : 500 pieces / box

SCG Smart**BOARD** polyurethane joint sealant

- This is the polyurethane material used to seal the joint, easily used, and perfectly adhere to the surface of SmartBoard or any construction materials such as fiber cement, concrete, brick, roof tile, ceramic tile, aluminium, timber, glass.
- Used as a joint sealant which can well prevent the leakage, can be used in either external or internal of building. Endure to the climate circumstance, and can be painted over without altering the color shade.
- Containing size : 310 ml. / tube, and 600 ml. / foil tube

SCG Smart**BOARD** C 74, U 76 Galvanize Frame

- Thick steel material providing strength, safety, and manufactured in accordance with TIS.863-2532 with full thickness of 0.55 mm.
- Economic section with 45, 47 mm. width frame section, which will not require to make the support for the frame in the joint area between SCG Smart**BOARD** panel, and will reduce the time and labor for installation. The material is endured for corrosion or rust, and the surface is coated by Hot Dip Galvanized Steel Z 22.
- Coated by specially thick surface to prevent rust or corrosion.

SCG Smart**BOARD** Plaster Joint Compound

- This is ready-usable plaster cement for joint plastering especially made for SCG Smart**BOARD**. The cement matrix is viscous resulting into smooth plastering surface, easily mixed, no shrinkage, crack, peeling because the material provide high adhesive and can be easily furnished by sandpaper.
- **Suit with wall work.**
- Containing size : 25 kg. / bag

FIRM FLEX TECHNOLOGY

Fixing a nail or screw on SCG SmartBOARD

1. Fix on SCG Smart**BOARD** 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.


Screw / Nail Span : 20 cm.
See ; A Zone Picture

Screw / Nail Line

A Zone Picture
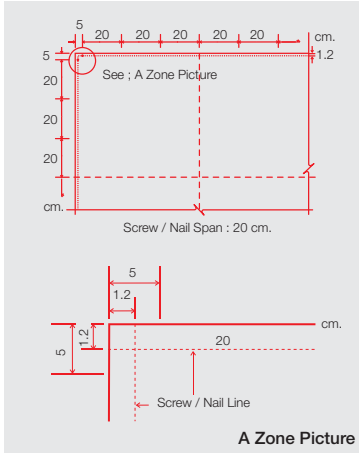
Installing SCG SmartBOARD Ceiling and Wall

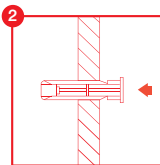| Product	Thickness (mm.)	Installation type	Jointing Accessory	Fixing Accessory
Internal / External Ceiling		SCG Smart**BOARD** Polyurethane joint sealant	Fix with 1.5 x 3.0 inch wooden studs. With maximum stud span of 60 cm.	1, 1.5 inch Wood nail
Lite	3.2 - 3.5			
Squared Edge	4.0			
Ventilated	4.0			
Wood Grain	4.0		Fix with 0.55. thick Gulvanize Steel Studs of 100 and 40 cm. respectively.	
Ventilated Wood Grain	4.0			
3-inch Square Lining	4.0			
Ventilated 3-inch Square Lining	4.0			
Squared Edge	6.0			
Internal Wall			Fix with 0.55 mm. thick SCG Smart**BOARD** C 74, U 76 Gulvanize Frame without pre-drilling with the maximum stud span of 60 cm.	SCG Needle Point Screw 23 mm. (Counter sunk head)
Squared Edge	8.0 - 12.0			
4-inch Square Lining	8.0			
6-inch Square Lining Wood Grain with Golden Teak Color	8.0			
Internal Wall		SCG Smart**BOARD** Plaster Joint Compound		
Tapered Edge	8.0			
External Wall		SCG Smart**BOARD** 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)
Squared Edge	8.0 - 16.0			
6-inch Square Lining Wood Grain with Golden Teak Color	8.0			
Floor		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)
Squared Edge	16.0 18.0			

*Please study SCG Smart**BOARD** Installation manual for more information.

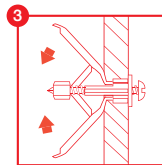## Hanging Objects on SCG SmartBOARD Ceiling and Wall

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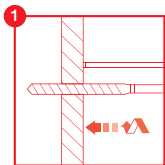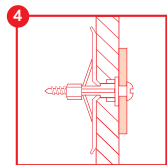

1. Mark and Drill your desire point
2. Sunk butterfly-wing plastic hook into the ceiling or wall hole
3. Drill the screw into the butterfly-wing plastic hook
4. When the screw is completely installed the butterfly-wing will be tightly fix with the SCG Smart**BOARD**

Recommendations

1. Use the table below to estimate the weight baring level of different thickness and usage of SCG Smart**BOARD**.
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 Smart**BOARD** 3.5 mm. thick	Ceiling	butterfly-wing plastic hook PT - 5 with drilling screw	5
SCG Smart**BOARD** 4 mm. thick	Ceiling	butterfly-wing plastic hook PT - 5 with drilling screw	7
SCG Smart**BOARD** 6 mm. thick	Ceiling	butterfly-wing plastic hook PT - 13 with drilling screw	10
SCG Smart**BOARD** 8 mm. thick	Wall	butterfly-wing plastic 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 orginal surface color. (the durability of the paint depends on the quality of your chosen paint)

SCG

0912