

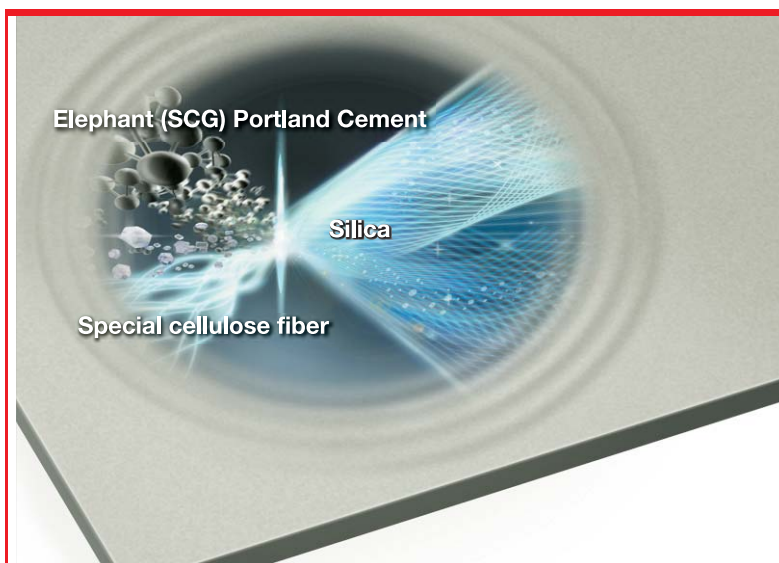
Ceiling Wall Floor SCG Smartboard

Fiber Cement Board
Non Asbestos



SCG Smartboard

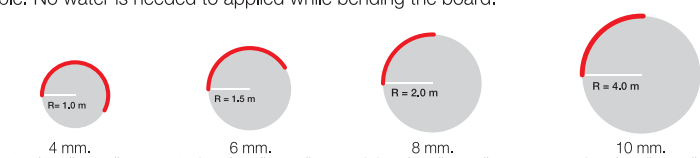
is a new generation of fiber cement material with **FIRM & FLEX** Technology made the board gain strength, durability and elasticity in one time. SCG Smartboard, with state-of-the-art composition of Elephant (SCG) Portland Cement, Silica and Special cellulose fiber through Autoclave process, is specifically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



FIRM & FLEX Technology

High molecular bonding strength from the special material composition.

Special Properties



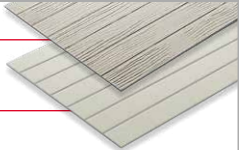

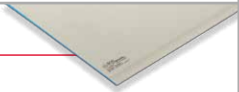





| | | |
|-------------|---|--|
| FIRM | High impact strength | High impact strength from state-of-the-art composition of Elephant (SCG) Portland Cement, Silica and Special cellulose developed by our laboratory. |
| | Water-Resistance and Non-decay | Long lasting even using in hot, humid, and strong raining weather condition according to JIS Standard A5420. |
| | Termite Resistance | Termite resistance from Portland cement material. |
| FLEX | Flexibility for various designs | <p>Bendable. No water is needed to applied while bending the board.</p>  <p>4 mm. 1 m. bending radius 6 mm. 1.50 m. bending radius 8 mm. 2.0 m. bending radius 10 mm. 4.0 m. bending radius</p> |
| | 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 ² 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 | T-Bar Space lining No space lining | 3.6 | 0.73 | Squared Edge 3.2, 3.5, 4, 4.5, 6 mm. thick  |
| | | 610 x 1220 (2'x4') ^① | | 3.6 | 0.74 | |
| | | 1220 x 1220 (4'x4') ^① | | 7.2 | 1.49 | |
| | 3.5 | 600 x 2400 | | 7.6 | 1.44 | |
| | | 1200 x 1200 | | 7.6 | 1.44 | |
| | | 1200 x 2400 | | 15.2 | 2.88 | |
| | | 603 x 1210 | | 3.9 | 0.73 | |
| | | 610 x 1220 (2'x4') ^② | | 4.0 | 0.74 | |
| | | 1220 x 1220 (4'x4') ^② | | 7.9 | 1.49 | |
| | | 1220 x 2400 (4'x8') | | 15.8 | 2.97 | |
| | 4 | 600 x 1200 | | 4.4 | 0.72 | Timber 4 mm. thick  |
| | | 600 x 2400 | | 8.7 | 1.44 | |
| | | 1200 x 1200 | | 8.7 | 1.44 | |
| | | 1200 x 2400 | | 17.4 | 2.88 | |
| | 4.5 | 610 x 610 (2'x2') ^③ | | 2.3 | 0.37 | |
| | | 1220 x 1220 (4'x4') ^③ | | 9.0 | 1.49 | |
| | | 1220 x 2400 (4'x8') ^③ | | 18.0 | 2.97 | |
| | | 1220 x 2400 (4'x8') ^③ | | 20.2 | 2.97 | |
| | 6 | 1200 x 2400 | | 26.1 | 2.88 | |
| | | 1220 x 2440 (4'x8') | | 27.0 | 2.97 | |
| | 4 | 600 x 2400 | Space lining No space lining | 8.7 | 0.70 | Wood Grain 4 mm. thick  |
| | | 1200 x 1200 | | 8.7 | 0.70 | |
| | | 1200 x 2400 | | 17.4 | 0.35 | |
| Ventilated Ceiling | 4 | 600 x 1200 | Space lining No space lining | 5.0 | 0.72 | 3-inch Square Lining 4 mm. thick  |
| | | | | 5.1 | | |
| | | | | 5.1 | | Ventilated 3-inch Square Lining 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') ^{①②} | | 53.6 | 2.97 | |
| | 8 | 1200 x 2400 1200 x 2800 1220 x 2440 (4'x8') | Space lining | 34.8 | 2.88 | Squared Edge 8, 9, 10, 12 mm. thick  |
| | 9 | 1200 x 2400 1220 x 2440 (4'x8') | | 40.6 | 3.36 | |
| | | 1200 x 2400 1220 x 2440 (4'x8') | | 36.0 | 2.97 | |
| | 10 | 1200 x 2400 1220 x 2440 (4'x8') | | 39.2 | 2.88 | |
| | 12 | 1200 x 2400 1220 x 2440 (4'x8') | | 40.4 | 2.97 | |
| | | 1200 x 2400 1220 x 2440 (4'x8') | | 43.5 | 2.88 | |
| | 8 | 1200 x 2800 | Space lining | 44.9 | 2.97 | 4-inch Square Lining 8 mm. thick  |
| | | 1200 x 2800 | | 52.2 | 2.88 | |
| | 6 | 600 x 3000 ^② | Space lining No space lining | 53.9 | 2.97 | 6-inch Square Lining Wood Grain (Golden Teak Color) 6, 8 mm. thick  |
| | 8 | 600 x 3000 | | 16.0 | 1.80 | |
| Underlay | 8 | 1200 x 2400 1200 x 2800 1220 x 2440 (4'x8') | Space lining No space lining | 21.5 | 1.80 | Squared Edge 8, 9, 10, 12 mm. thick  |
| | 9 | 1200 x 2400 1220 x 2440 (4'x8') | | 34.8 | 2.88 | |
| | 10 | 1200 x 2400 1220 x 2440 (4'x8') | | 40.6 | 3.36 | |
| | | 1200 x 2400 1220 x 2440 (4'x8') | | 36.0 | 2.97 | |
| | 12 | 1200 x 2400 1220 x 2440 (4'x8') | | 39.2 | 2.88 | |
| Flooring | 16 | 1200 x 2400 1200 x 3000 1220 x 2440 (4'x8') ^③ | No space lining | 40.4 | 2.97 | Squared Edge 16, 18 mm. thick  |
| | 18 | 1200 x 2400 1220 x 2440 (4'x8') ^③ | | 43.5 | 2.88 | |

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

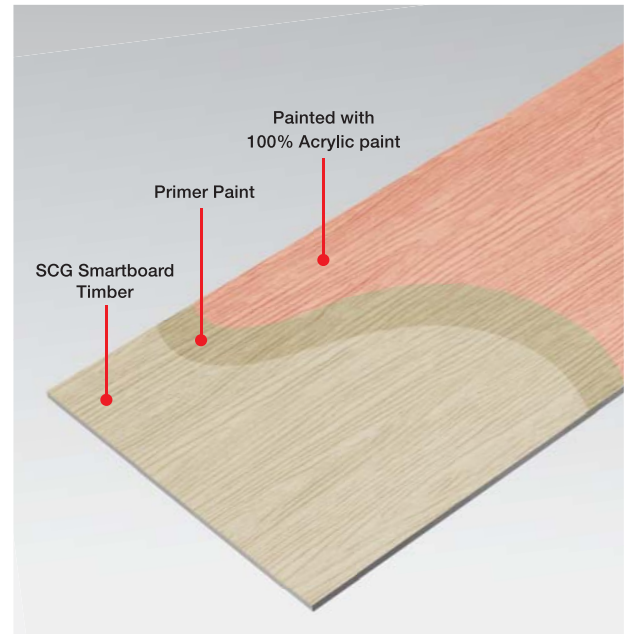
SCG Smartboard

Timber 4 mm. thick

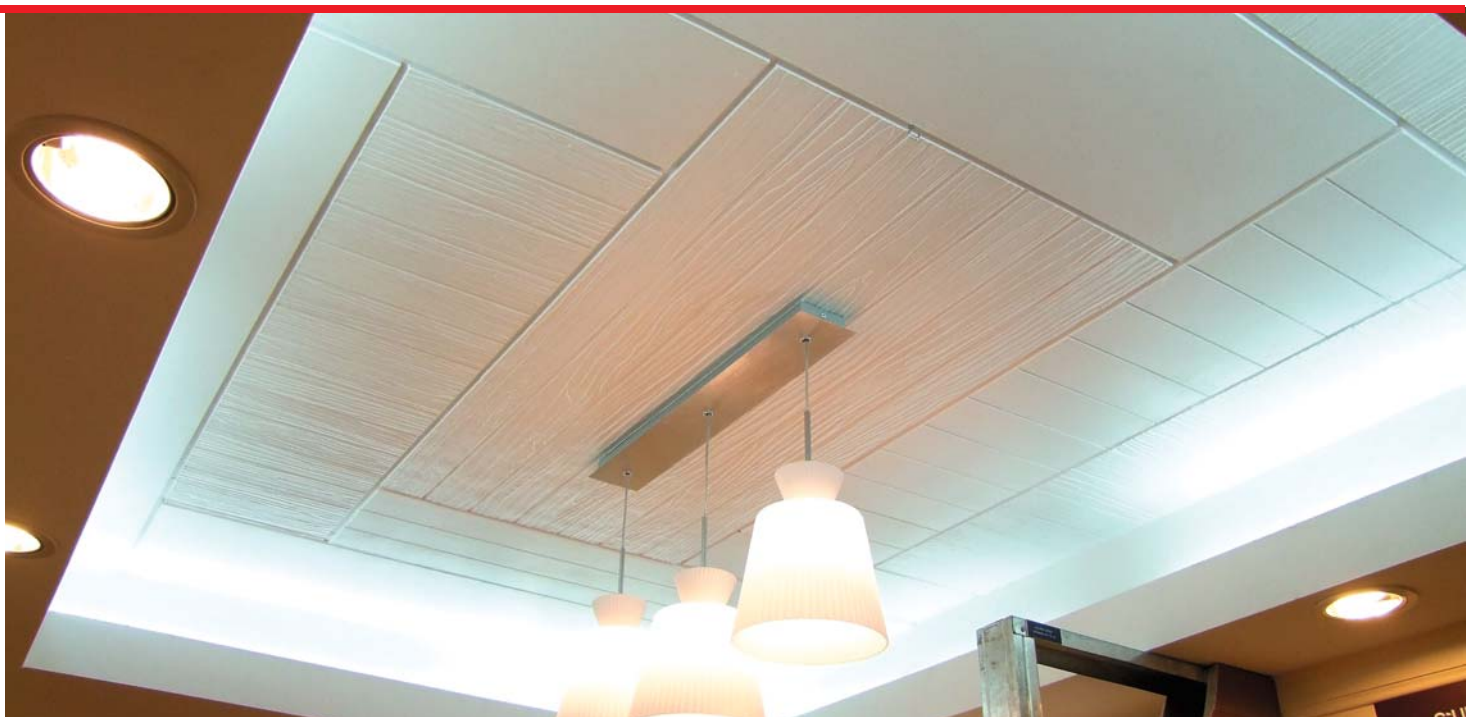
- **Outstanding with deep wood**
suitable for natural housing style.
- **Easy and fast installation**
because of light-weight and various dimension.
- **Uncolor**
apply 100% Acrylic paint at least 2 times over primer paint.



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 Ceiling

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



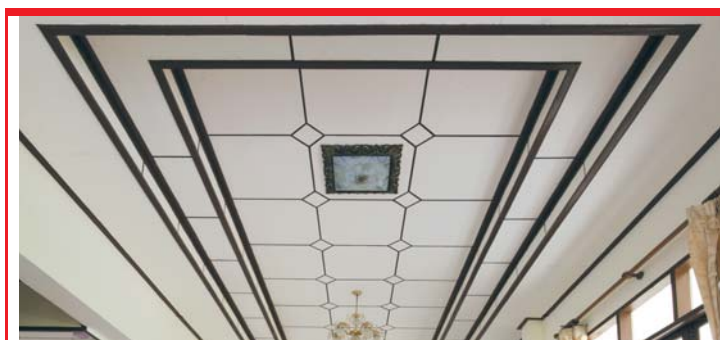
Internal Space No Lining Ceiling

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



Internal Space Lining Ceiling

Using SCG Smartboard Squared Edge 4 mm. thick.

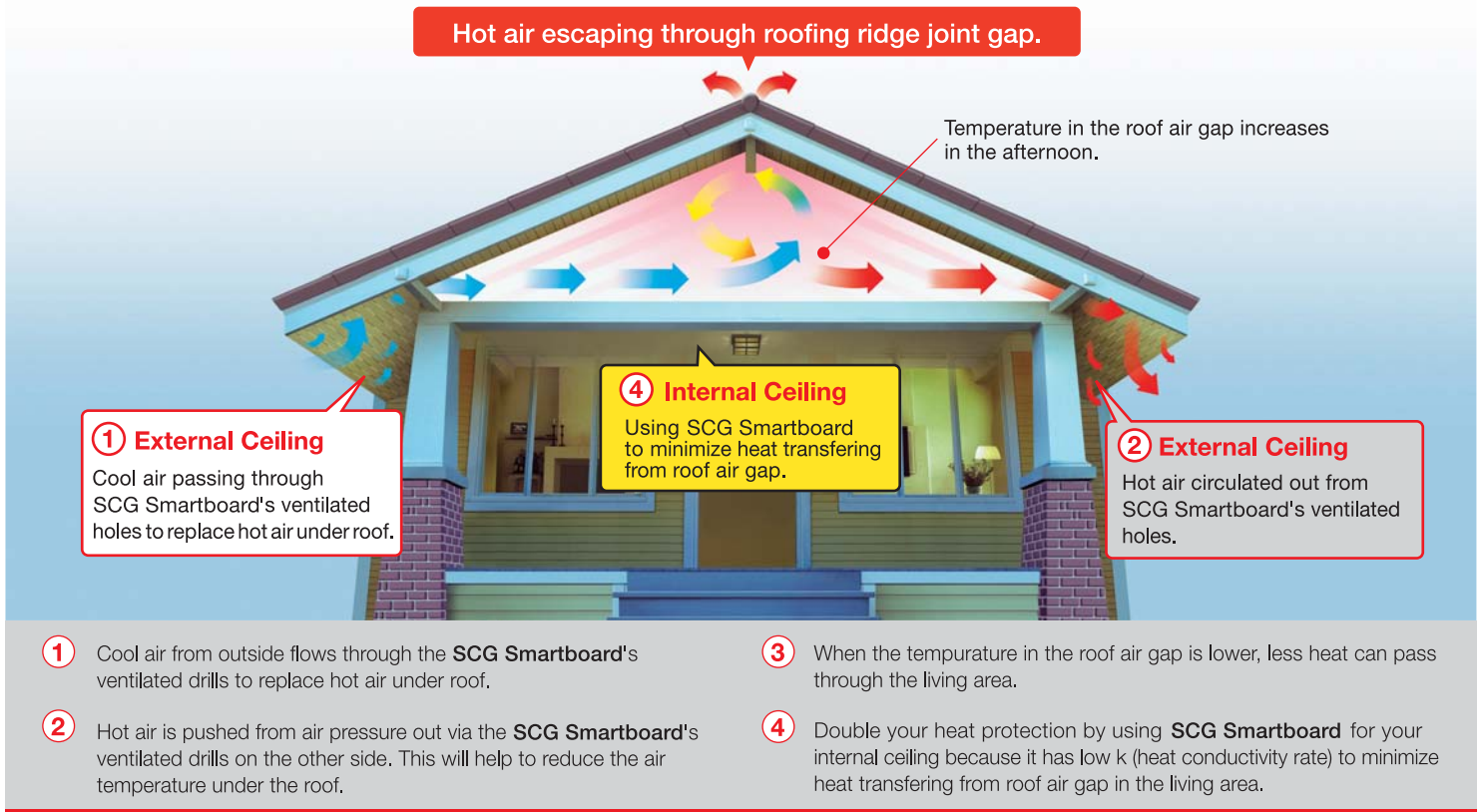


Internal Space Lining Ceiling

Using SCG Smartboard Squared Edge 4 mm. thick to give outstanding elegant style.

SCG Smartboard with Ventilated drills for ventilation ceiling application

Cool House System



SCG Smartboard Ceiling with ventilation drills

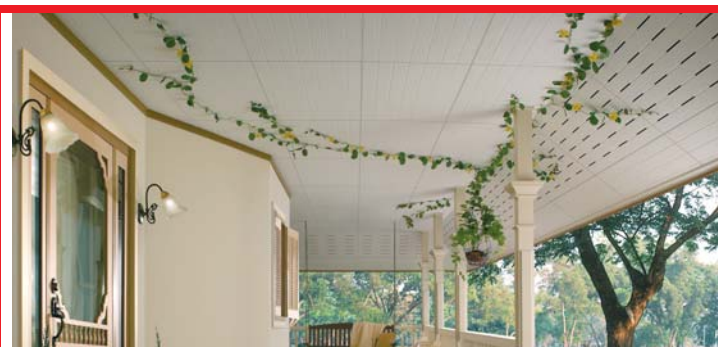
This is the ceiling with the factory-made drilled holes suitable for eaves ceiling application because it can endure the water or moisture. Three types of ventilated SCG Smartboard are profiled ventilated, ventilated wood grain, and ventilated 3-inch lining.



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.

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 Smartboard 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 Smartboard Squared Edge 8 - 18 mm. thick or 4-inch Square Lining 4 mm. thick to create space lining wall.



External Wall

Using SCG Smartboard 4-inch Square Lining 8 mm. thick.

Internal Wall

Using SCG Smartboard Tapered Edge 8, 12 mm. thick to create concealed look for your wall.

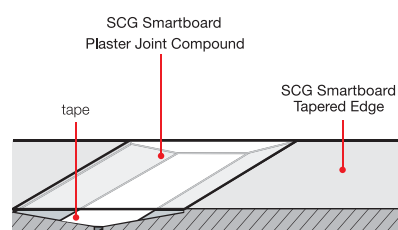
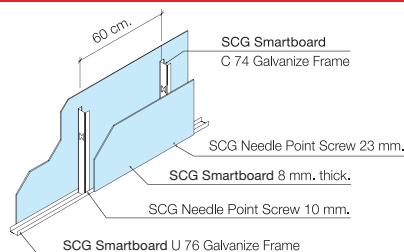


before



After

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



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.

Internal Wall

Using SCG Smartboard Tapered Edge 8 mm. thick

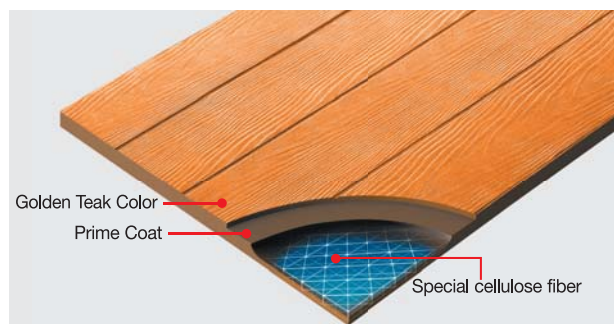
SCG Smartboard

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.

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

* Not recommended for structural materials



High Quality 2-layer coating finished from the factory -made



Decoration by covering the surface of SCG Smartboard



Internal Wall

Using SCG Smartboard Tapered Edge 8 mm. thick painted with 100% Acrylic paint.



Internal Wall

Using SCG Smartboard 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 Smartboard Squared Edge 8 mm, thick.



External Cladding
Phenix pulp and paper
plant, Khonkaen

Creating space lining by using SCG Smartboard Squared Edge 10 mm, thick.



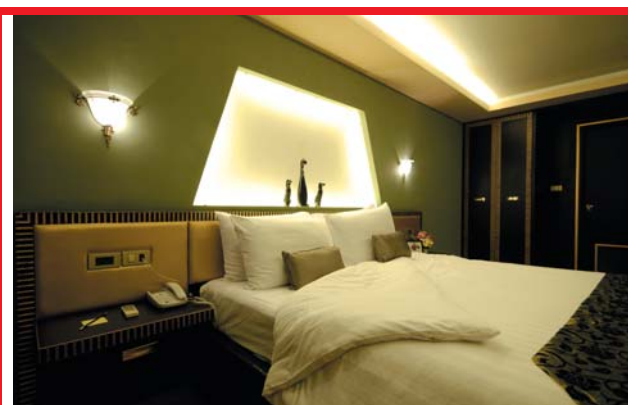
Internal Wall
SCG Experience,
Bangkok

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



External Fence
Picasus narcissus,
Bangkok

Using SCG Smartboard Squared Edge 8 mm, thick make the groove spacing fence decorated by make beautiful hole drilling.



Internal Wall
Luxor Hotel,
Bangkok

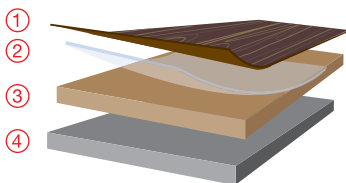
Using SCG Smartboard Squared Edge 8 mm, thick make the lighting pocket on bed's head.

SCG Smartboard Flooring and Underlay

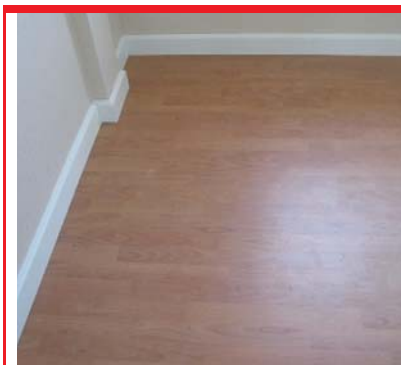
SCG Smartboard Underlay

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.



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



Floor Underlay

Using **SCG Smartboard** Squared Edge 8 mm. thick.

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.



Sub Roof

Using **SCG Smartboard** Squared Edge 8 mm. thick.

SCG Smartboard Flooring

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 | Thickness (mm.) | Distance of support (cm.) | Type of building | Live Load (kg./m ²) |
|-----------------------------|-----------------|---------------------------|--|---------------------------------|
| SCG Smartboard Floor | 16 | 40 | House / Residence | 150 |
| | | 40 | Hotel / Dormitory | 200 |
| | 18 | 40 | Office / Bank | 250 |
| | | 40 | School / University | 300 |
| | | 30 | Departmentstore / Cinema / Hall / Restaurant | 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 Squared Edge 16, 18 mm. thick



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 Smartboard C 74 and U 76 Galvanize Frame, or fix SCG Smartboard 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 Smartboard polyurethane joint sealant

- This is the polyurethane material used to seal the joint, easily used, and perfectly adhere to the surface of SCG 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 Smartboard 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 Smartboard 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.



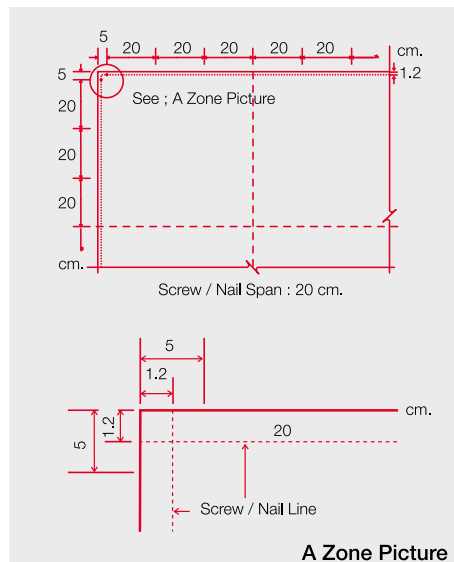
SCG Smartboard Plaster Joint Compound

- This is ready-usable plaster cement for joint plastering especially made for SCG Smartboard. 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



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.



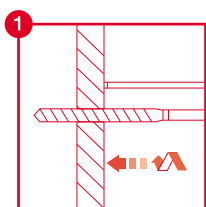
Installing SCG Smartboard Ceiling and Wall

| Product | Thickness (mm.) | Installation type | Joining Accessory | Fixing Accessory |
|--|-----------------|---|---|---|
| Internal / External Ceiling | | | | |
| 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 | | | |
| Internal Wall | | | | |
| 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 | | | |
| Internal Wall | | | | |
| Tapered Edge | 8.0 | SCG Smartboard Plaster Joint Compound | | |
| External Wall | | | | |
| 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 | | | |
| Floor | | | | |
| 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 | | | |

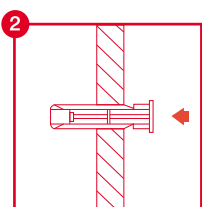
* Please study SCG Smartboard Installation manual for more information.

Hanging Objects on SCG Smartboard Ceiling and Wall

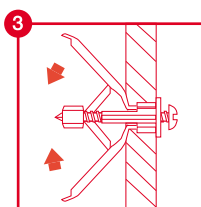
Can be easily done by sinking butterfly-wing plastic hook in the ceiling or wall in the point that you wish to hang your object, simply follow these steps



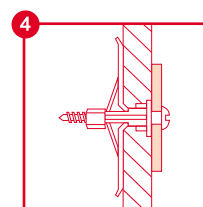
Mark and Drill your desire point



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 |

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.

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)