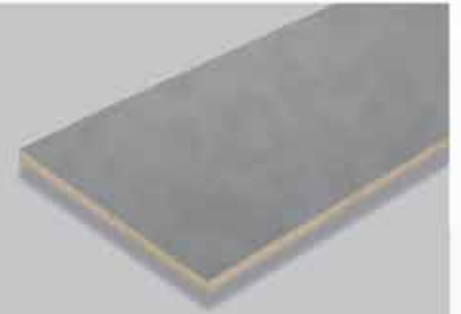# SCG Cementboard

## CEMENT BOARD

**SCG Cementboard** is made by using high pressure to press a mixture of chipped wood particles and portland cement until the desired thickness is reached. Then, pass special process to create a smooth surface and attractive color resembling a bare cement surface.

**SCG Cementboard** is a product combining the good qualities of cement and wood to yield a material featuring wood-like resilience with cement-like strength and weather resistance all in one.

Each board goes through the production process with special technology. The surface is a combination of portland cement and wood particles thoroughly chopped and ground into powder form. This makes a smooth, detailed, attractive and splinter-free surface. Meanwhile, the middle layer is a mixture of portland cement and wood pieces chopped and sliced into long, thin sheets for more adhesion to the cement and wood. As a result, the board has more strength and higher density.

SCG Cementboard's production process and material usage are environmentally friendly, while being free from asbestos and other harmful ingredients to your health like urea-formaldehyde. Once the production process is finished, each SCG Cementboard is cut to size and tested for quality to assure quality products that are attractive, durable and suitable for both interior and exterior use.

## Features

**Attractive** with colors and patterns resembling bare cement work that's perfect for designs requiring exposed surfaces.

**No rust stains** or white stains on cement boards.

**Smooth surface** due to a special process for preventing surface splinters.

**Durable** and able to bear weight meeting international standards.

**Multipurpose** for interior walls and floors.

## Size, thickness and weight

| Standard Size | 4' x 8' (Foot) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Thickness (mm.) | 8 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 24 |
| Weight (kg./po.) | 33.0 | 41.4 | 49.7 | 57.7 | 62.8 | 67.3 | 75.3 | 83.6 | 100.3 |
| Weight (kg./sq.m.) | 11.1 | 13.9 | 16.7 | 19.4 | 21.1 | 22.6 | 25.3 | 28.1 | 33.7 |

| Standard Size | 120 x 240 cm. | | | | | |
|---|---|---|---|---|---|---|
| Thickness (mm.) | 8 | 10 | 12 | 16 | 20 | 24 |
| Weight (kg./po.) | 32 | 40 | 48 | 65 | 81 | 97 |
| Weight (kg./sq.m.) | 11.1 | 13.9 | 16.7 | 22.6 | 28.1 | 33.7 |

Durable | No Delamination | Easy Use and Quick Installation | Termite Resistant | Heat Resistant | Asbestos Free | Environmentally Friendly

## Technical information

| Specific information | Unit | TIS 878-2537 | SCG Cementboard (Average value from test) |
|---|---|---|---|
| Density | kg./m³ | 1,100-1,300 | 1,300 |
| Modulus of elasticity (MOE) | N/mm² | ≥ 3,000 | 5,470 |
| Modulus of rupture (MOR) | N/mm² | ≥ 9 | 12.7 |
| Tensile strength (perpendicular to surface) | N/mm² | ≥ 0.5 | 0.6 |
| Moisture content | % | 9 – 15 | 10.7 |
| Thickness swelling (after 24 hours immersion in water) | % | ≤ 2 | 0.6 |
| Thermal conductivity (K) | W/m°c | ≤ 0.25 | 0.1 |
| Other test values | | | |
| Water absorption rate (after 24 hours immersion in water) | % | | 10 |
| Acoustic reduction rating | dB | | 30 – 35 |
| pH Measure | pH | | 12 |

## Uses for different thicknesses of SCG Cementboard

| Use | Thickness (mm.) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Choosing the suitable thickness for each application* | 8 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 24 |
| Interior wall decoration | ● | | | | | | | | |
| Interior wall structure | ● | ● | ● | ● | ● | ● | ● | ● | |
| Interior/exterior flooring | | | | | | | | ● | ● |

## Special Features

### Fire resistance:

- Since SCG Cementboard has a high ratio of cement as a component, it has fire resistant qualities. SCG Cementboard has also passed BS 476 Part 6 and 7. The wall system built from SCG Cementboard has passed
- BS 476 Part 22 test for 1, 2 and 4-hour fire resistant walls.

### Soundproof:

- The SCG Cementboard soundproof wall system has passed STC 41, 50 and 55.
- Since the SCG Cementboard has high density and efficiently reduces ambient sounds with the following sound transmission index:

## Table of Frame Spacing for Maximum Load

| Product | Thickness (mm.) | Frame Spacing (cm.) | Building Type | Load Compliance Municipal Laws (kg./sq.m.) |
|---|---|---|---|---|
| SCG Cementboard | 20-24 | 61 x 122 | Residence | 150 |
| | 20-24 | 61 x 122 | Condominium, hotel, dormitory | 200 |
| | 20-24 | 61 x 122 | Office, bank | 250 |
| | 20 | 61 x 61 | Commercial, university, school | 300 |
| | 24 | 61 x 122 | | |
| | 20 | 40.6 x 40.6 | Department store, theater, auditorium, restaurant | 400 |
| | 24 | 61 x 122 | | |
| | 20 | 40.6 x 40.6 | Warehouse, museum, bleacher, industrial factory, publishing house | 500 |
| | 24 | 61 x 61 | | |

**Note:** • The load in the table is calculated from installation where the load is equally distributed and does not include concentrated force, impact load or vibrations.

• The framing that supports the boards must be strong. The entire piece must be installed and the framing must support the piece on all four sides.

# Wall Installation

| Distance for anchoring the boards (mm.) | |
|---|---|
| Distance from the anchor point to the corner of the board | 75 |
| Distance from the anchor point to the edge of the board | 30 |
| Distance between the anchor points at the edge of the board | 20 |
| Distance between the anchor points at the center of the board | 30 |

| Choosing the right framing for the type of work | | |
|---|---|---|
| Type of work | Framing | |
| | Galvanized steel | Steel |
| Interior walls | ● | |
| Floor | | ● |

**• Recommended framing:**
- Galvanized framing C74, U76 SCG.
- Steel framing:
  - C-shaped steel (light gauge) size 75 x 45 x 15 mm., 100 x 50 x 20 mm. or 150 x 50 x 20 mm. with 2.3 mm. thickness or thicker.
  - Steel size 100 x 50 or 150 x 50 mm. with 2.3 mm. thickness or thicker.

## Interior walls/Partition walls

| Board thickness | Framing | Installation |
|---|---|---|
| 8-20 mm. | • SCG Smartboard galvanized framing (C-74, U-76)<br>• Steel framing C 75 x 45 with 2.3 mm. thickness or thicker<br>• Frame spacing 61 x 244 cm. | Install the boards using one-way anchors on an adjustable frame with SCG 23 mm. needle point screws for galvanized frame or SCG self-drilling wing screw 28.5 or 32 mm. for steel frame. Seal the exposed nail heads. Paint with contact primer before painting with the desired paint system with the method recommended by the paint manufacturer. |
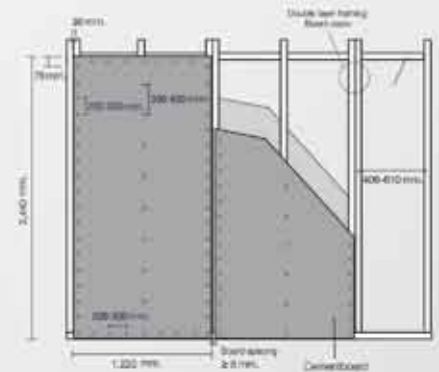
# Floor Installation

## Interior floors with exposed surface

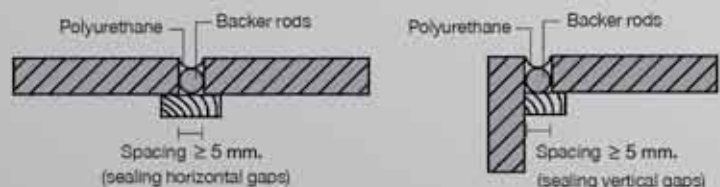| Board thickness | Framing | Installation |
|---|---|---|
| 20-24 mm. | • Steel framing C100 x 50 x 20 x 23 x 3.2 mm.<br>• Space main joists every 40.6 or 61 cm.<br>• Secondary joists 122 cm. | Install framing and adjust cement board. Then, coat with clear epoxy or clear polyurethane. |

TOP VIEW
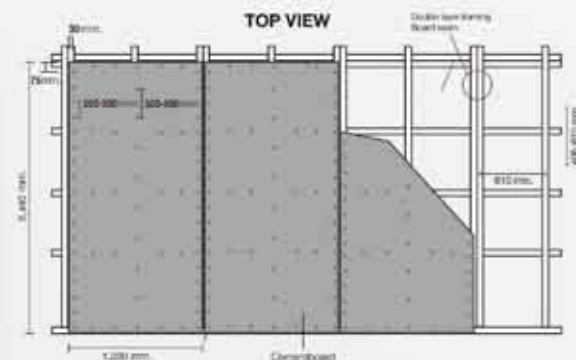
# Finishing

## 1. Sealing jointing gaps:

1. Clean and fill the gaps with backer rods.
2. Neatly press the backer rods into the gaps.
3. Tape the floorboards on both sides of the gaps.
4. Apply SCG polyurethane sealant on the gaps.
5. Level off the SCG polyurethane sealant with a grout float.
6. After approximately 24 hours, peel off the tape.

   *** Note: T, U and L-shaped stainless edging or plastic edging can be used to conceal the grout lines.

Polyurethane — Backer rods
Spacing ≥ 5 mm.
(sealing horizontal gaps)

Polyurethane — Backer rods
Spacing ≥ 5 mm.
(sealing vertical gaps)

## 2. Sealing exposed nail heads:

Equipment: Acrylic filler and powdered color (for exposed surfaces)

1. Mix the sealing material at the ratio recommended by the manufacturer. Try to match the color of the floorboards.
2. Cover the exposed nail heads with sealing material for holes that are drilled 1-2 mm. larger than the edge of the nail heads.
3. Seal the nail heads with the sealing material and neatly level off the surface with a grout float.
4. Sand the surface with 180-240 grit sandpaper until smooth.
5. Clean the surrounding area with a brush.

   *** Note: the above method for sealing exposed nail heads is suitable for exposed surface work. However, if the cementboards are to be painted, change the method to using glue, cement and powdered color instead.
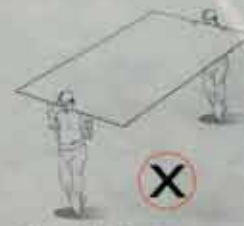
## 3. Surface Painting and Coating

| Usage | Paint system | Clear coating for exposed surfaces |
|---|---|---|
| Interior walls | Interior acrylic paint with primer coat applied before | Lacquer spray, clear polyurethane |
| Interior floors | Polyurethane paint system, wood stain color system | Clear polyurethane |

# Product Storage and Transportation

Cover with a tarp to prevent exposure to dust and water.

Support with 1.5 x 3 inches. wood props every 60 cm. or with pallets.

Lift and move as shown.

This method of moving is not recommended as the boards may curve.

## Warning:

• Do not use this product for building structures or anything other than its intended purpose. This product must be installed according to the installation manual and only standard equipment from the manufacturer's company should be used. • Do not ingest. • Do not inhale. • Never use this product in wet and humid areas.

## Recommended safe work method:

• SCG Cementboard contains cement. Cutting, grinding, drilling or sanding this product may spread dust. If a large amount of this dust is ingested or inhaled over a long period of time, it may cause harm to the respiratory system and body. • This product should be cut, ground, drilled or sanded in a well ventilated place and cutting, grinding, drilling or sanding equipment that causes a large amount of dust should be avoided. • Do not work in stormy weather or when the ground is wet. • Wear standard personal safety equipment such as a dust mask, safety goggles, shirt, gloves and shoes. • In order to avoid potential hazards, do not allow anyone without standard personal safety equipment or anyone who is not involved in the work to come near the work area. • This product must be lifted or moved carefully. Do not lift with your back. Do not twist or turn while lifting and avoid working continually for long periods of time to avoid injuries and soreness. • Anytime lifting is required, use the method of crouching, gripping the product firmly and using the leg muscles to lift. • To clean the work area after cutting, grinding, drilling or sanding the product, use a vacuum machine then completely seal the bag containing the dust or use water to clean. Do not sweep as it may spread dust. • Separate and gather leftover pieces from the installation, reparation or demolition of this product with caution then properly dispose of them as approved by law. • Wash with clean water after cutting, grinding, drilling or sanding the product.

The installation manual is constantly adjusted. Designers, construction site superintendents and installers must be certain that the installation manual used is the most recently issued. If there is any uncertainty, check at www.scgbuildingmaterials.com