



JD-Panel®

an innovative finest architectural decorative finish

MADE FOR QUALITY



SOBEN INTERNATIONAL

High Performance Building Boards & Solutions for Sustainable Construction

SOBEN KYOLITE

JD-Panel®

AN INNOVATIVE FINEST
ARCHITECTURAL DECORATIVE FINISH

Nowadays comfortable built environment provides people with good accommodations and convenient workplaces, but often brings negative impacts to our natural environment. Energy saving, low carbon emission and reduction in use of natural resources for building construction are advocated for sustaining construction development further. Soben International is committed to providing eco-friendly building products and building solutions for sustainable construction. From raw materials used in manufacturing to site installation methods, all in all align with environmentally friendly, consistency of quality as well as ease of installation adapting to construction needs.

JD-Panel, a “Japan Design” Panel, is made by Soben International and Kyolite Japan, a leading pre-finished panel manufacturer specialised in advanced coating technology since 1933 in Japan. JD-Panel is a non-combustible cellulose fibre reinforced calcium silicate board coated with an unique film layer of high strength modified polyurethane resin. The coating looks crystal appearance, fresh and neat colour tone. The panel is fungal resistant, chemically inert and water resistant. JD-Panel is an innovative decorative finish, a perfect substitute of conventional wall finishes, such as ceramic tile, wall paper and high pressure laminate decoration. Dry installation of JD-Panel at walls in kitchen or bathroom can be finished easily within a day whereas finishing with ceramic tile may take a week. Other benefits, ease of cleansing and reduction of maintenance makes JD-Panels more cost effective. Grease or mould at the grout joints of ceramic tiles cannot be cleaned unless refurbishment is carried out. The innovative coating on JD-Panel is a durable aesthetic finish. It makes the panel so versatile for many applications not only at accommodations, but also public facilities and commercial developments, including metro stations, shopping malls, hotels and high-rise offices. JD-Panel has got the seal of Ministry of Land and Transport of Japan when used as a kitchen panel in residential buildings for a decade.

JD-Panel is a 100% eco-friendly product that does not contain any harmful substances or inorganic fibre and free of formaldehyde. It is manufactured to ISO 9001, ISO 14001 and strict criteria as green labeled products governed by both Hong Kong Green Council and Singapore Environmental Council.



SPECIFIC PROPERTIES



Non-Combustibility



Water Resistance



Quality and Neat Finish



Excellent Dimensional Stability



Chemical Resistance



Fast Installation



Ease of Cleaning



Environmental Friendly



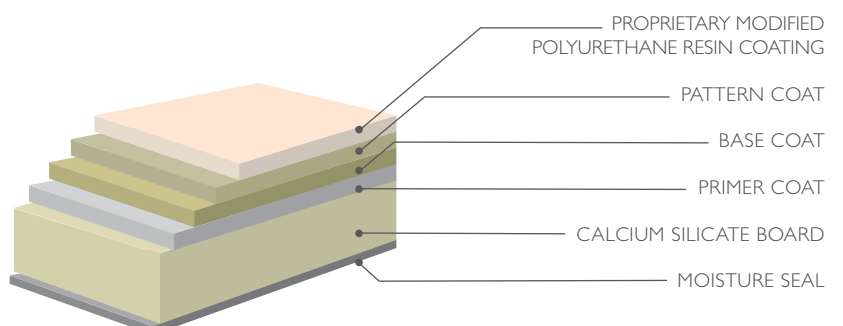
Economic

HIGH PERFORMANCE OF JD-PANEL

JD-Panel is manufactured to the highest quality with extensive tests to prove its serviceability and durability under severe test conditions.

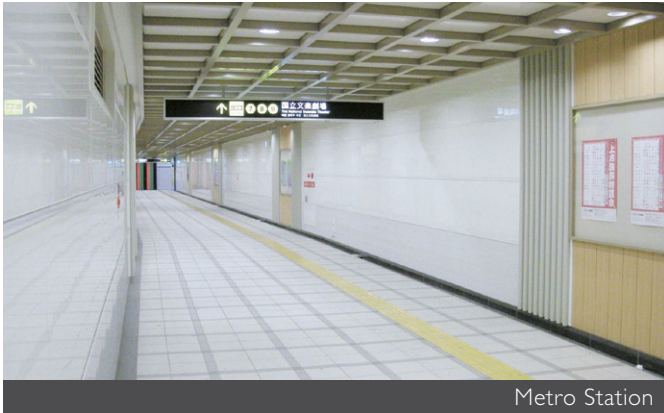
SPECIFICATIONS

Coating system of JD-Panel



APPLICATIONS

Whether the construction is a new built or retrofitting, domiciles, commercial buildings or public facilities, JD-Panel provides an aesthetic finish as project references shown here below:



Metro Station



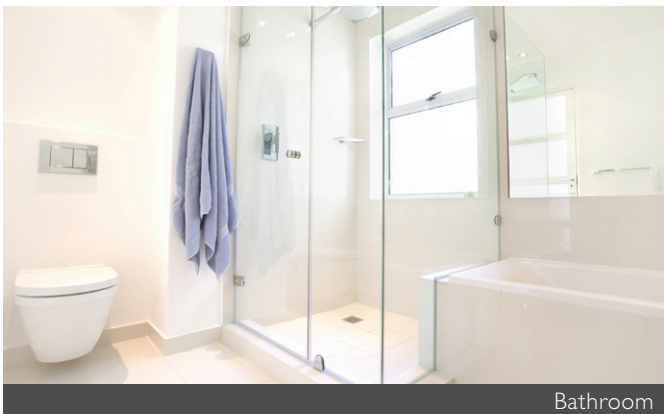
Shopping Mall



Kitchen



Commercial Tower



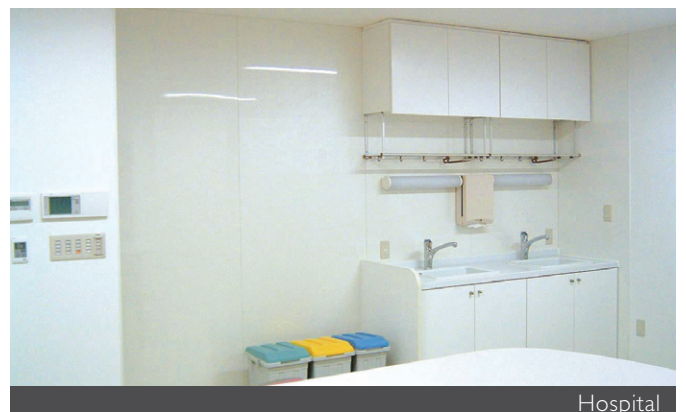
Bathroom



Toilet



Kitchen at Hospital

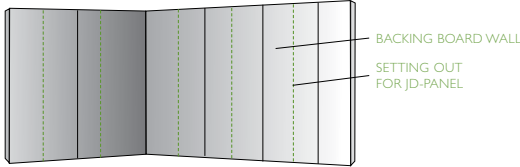
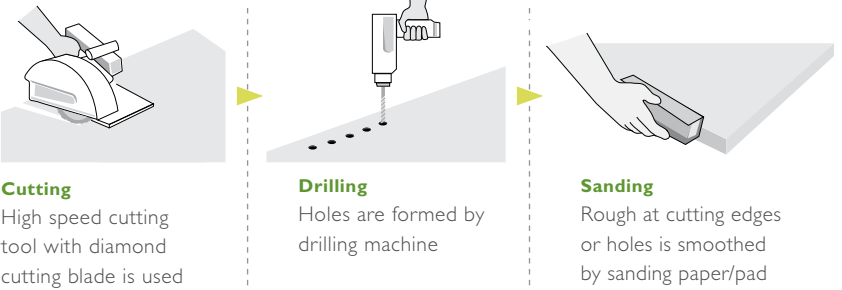
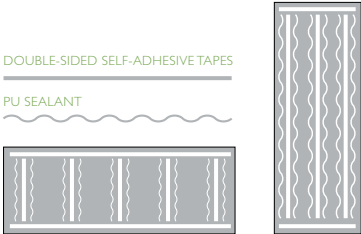
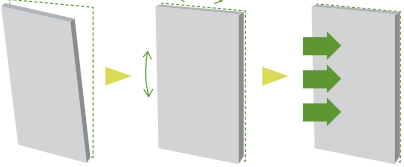
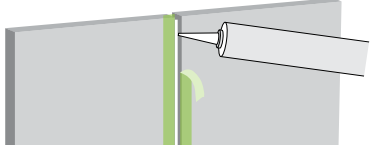


Hospital

FAQ - HANDLING, CARING AND USING OF PANELS

1	What requirements of backing board wall are suitable for installing JD-Panel?	Backing board wall can be constructed with calcium silicate boards, fibre cement boards or gypsum plasterboards. Board products with poor dimensional stability, such as magnesium oxide silicate based or timber based backing board is not suitable to be used with JD-Panel.
2	How to store panels properly?	JD-Panel should be placed horizontally on leveled ground or surface, stored under a shed.
3	How to care for surface of panels?	Using soft cloth with mild detergent to clean JD-Panel. Do not use cleaning agents with coarse powders or brush to scrub it.
4	Can it be cleaned by use of mould removers or bleaching agents?	The surface of JD-Panel is coated with a special resin which is water resistant and chemically inert. It remains unchanged after cleaning by alkaline or acidic detergents.
5	Does it need maintenance periodically?	No, it is maintenance free and just clean it with soft cloth and mild detergent when it is dirty.
6	Will the coating peel off and the colour fade?	The innovative coating of JD-Panel is extremely durable, water and chemical resistant. No peeling off or colour fading will occur when used and cleaned properly.
7	Can it be used as a finish of flooring or table top?	JD-Panel is a decorative finish layer applied on internal walls or partition. Soffits of false ceiling may be applied.
8	When JD-Panel is newly installed at bathroom/shower space, how soon it can be used?	After the silicone sealant caulking is fully cured (normally 24 to 48 hours after installation).
9	Can JD-Panel be put on the back wall of cooking bench in the kitchen?	Yes, with a distance of minimum 15cm from naked fire.
10	How to handle JD-Panel?	Never carry the panel on edge horizontally and do not store on edge.

INSTALLATION GUIDE FOR JD-PANEL

- Preparation of backing wall for receiving JD-Panel**

 - Backing board wall's surface should be flat
 - Setting out for JD-Panel is made on the backing board
 - Backing board should not warp due to water or moisture
- Cutting & forming hole on site**

 - Cutting**
High speed cutting tool with diamond cutting blade is used
 - Drilling**
Holes are formed by drilling machine
 - Sanding**
Rough at cutting edges or holes is smoothed by sanding paper/pad
- Putting adhesive on JD-Panel**

 - Put on double-sided self-adhesive tapes on the back of JD-Panel as shown
 - Apply PU sealant onto JD-Panel between the self-adhesive tapes
- Erecting JD-Panel**

 - Erect JD-Panels according to the lines set out on the backing wall
 - Adjust the position of JD-Panel aligning the setting out
 - Press JD-Panel onto the backing wall
 - Make sure all corners and edges of JD-Panel are tightly attached onto the back wall
- Caulking joints of JD-Panel**

 - Put on masking tapes along the butt joint of JD-Panel
 - Apply fungal-resistant silicon sealant at the joints and trim it smoothly
 - Remove masking tapes from JD-Panel
 - Clean up the JD-panels at least 24 hours after installation and drying of silicon sealant

CALCIUM SILICATE OF JD-PANEL

TEST	STANDARD	RESULT
PHYSICAL PROPERTIES		
Type of base board	BS EN 12467	Autoclaved cellulose fibre reinforced calcium silicate matrix
Size of board		900 x 2400 x 6 mm
Nominal weight	Ambient	7.0kg/m ² +/-
Apparent density	BS EN 12467	1000 kg/m ³ , +/- 10%
Flexural strength	BS EN 12467	> 8.0 MPa (lengthwise)
Minimum bending radius	Lengthwise	4800mm for 6mm
Moisture movement	ambient to saturated	0.05%
Dimensional changes in length due to relative humidity	BS EN 318	+ 0.017% @20°C, RH 30%~85% - 0.017% @20°C, RH 85%~30%
Thermal conductivity	EN 12664	0.185 W/mK
Linear thermal expansion	BS EN ISO 10515-8	-1.7x1E-6/°C
DURABILITY & AGING		
Durability and strength tests	BS EN 12467 & CE Mark	Category C sheet, intended for internal applications where are subjected to moisture and heat
Warm water test	BS EN 12467	Pass, in water at 60°C for 56 days
Soak-dry test	BS EN 12467	Pass, for 50 cycles of test
Water tightness test	ASTM C1185-08	No formation of drops of water after a 24-hour test
FIRE PERFORMANCE		
Reaction of fire	EN 13501-1	Euro Class A1
Non-combustibility	AS 1530.1 BS 476: Part 4 BS EN ISO 1182 JIS A 1312	pass
Heat of combustion	BS EN ISO 1716 Ministry of Land & Transport, Japan	pass NM3768 -A1
Resistance to continuous heating	In-house	100°C
ACOUSTIC PERFORMANCE		
Acoustic insulation	AS 1276.1 & 1191 ASTM E90 & E413 BS EN ISO 140-3 & 717-1	26 dB / STC 26 - 6mm thick 46 dB / STC 47 - 82mm thick drywall
ENVIRONMENTAL FRIENDLY		
Green board product	Hong Kong Green Council Singapore Environmental Council	Certified green label award
Organic emission	ASTM D5116-06	No formaldehyde, non-toxic & satisfied the emission tests
Recyclable product	ISO 14001	Crushed down for recycle use, Product made according to ISO 14001 environmental management system



Calcium silicate board made to criteria of green labels

JD-PANEL

TEST	STANDARD	RESULT
Type of coating	JIS	Proprietary ultraviolet curing modified polyurethane resin
Heat & smoke release	AS/NZS 3837	Classification I for wall & ceiling lining NCC BCA specifications C1.10 & A2.4
Reaction of Fire	EN13501-I	A2-S1,d0
Fire resistance	Ministry of Land & Transport, Japan	Pass, Certification of Approval No - NM3508-AI

DURABILITY & AGING

Coating Hardness - pencil scratch test	JIS K 5400 & JIS Z 1522	2H
Adhesion - cross hatch tape peeling test	JIS K 5400	Pass, no peel-off
JAS 1st dip peel test	JAS Special Plywood Standards	Pass, in boiled water 4 hours and dried @ 60°C +/- 3°C for 20 hours
High-temperature and humidity Test	in-house	Pass, exposed to 50°C +/- 3°C & 95% RH 240 hours
Warm water half steeping test	in-house	Pass, in warm water at 60°C +/- 3°C for 240 hours
Second adhesion test (conducted after warm water test)	in-house & JIS Z 1522	Pass, no remarkable deterioration of adhesion
JAS cold-hot repeating test A	JAS Special Plywood Standards	Pass, no cracks, blister, wrinkles, grain depression and fading on the surface of sample, no remarkable changing of size @ 80°C +/- 3°C for 2 hours. @ -20°C +/- 3°C for 2 hours.
JAS photo colour fading test A	JAS Special Plywood Standards	Pass, no cracks, blister, wrinkles, grain depression and fading on the surface
Weather resistance, Weatherometer test	JIS K 5400 & CIELAB colour difference meter	Pass, $\Delta E = 0.62$ (S90) irradiated for 240 hours and water spray 18 minutes every 2 hours

IMPACT RESISTANCE

Iron ball falling impact test	JIS A 1408	Pass, no crack, peel-off, open hold and fracture on the surface
JAS impact resistance test B	JAS Special Plywood Standards	Pass, no crack and peel-off on the surface, 50 times of plumb bob repeatedly falling impact

CHEMICAL, STAIN AND FUNGAL RESISTANCES

Thinner rubbing test	In-house Standard	Pass, no softening, remarkable changing of surface and gloss
JAS staining resistance test A	JAS Special Plywood Standards	Pass, no colour residue on the surface Tested with methanol based black marker pen & blue ink
Stain pollution resistance test	In-house	Pass, pollutant removed by dry towel, damp cloth, neutral detergent, methanol and lacquer thinner
Ngal resistance	JIS Z 2801	Pass, escherichia coli NBRC 3972



HONG KONG

Soben International (Asia Pacific) Ltd

Unit 4A, Evernew Commercial Centre,
33 Pine Street, Kowloon, Hong Kong
Tel: +852 3173 2683 Fax: +852 3173 2688
Email: international@sobenboard.com
www.sobenboard.com

N. IRELAND, UK

Soben International (Europe)

Tel: +44 78 9423 0583
Email: europe@sobenboard.com

SINGAPORE

Soben International (Singapore)

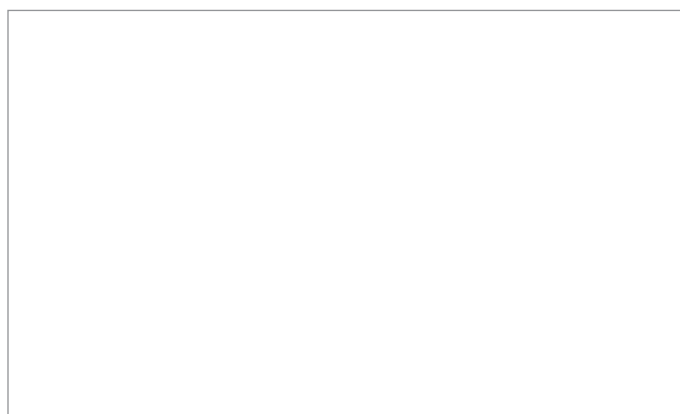
Tel: +65 9680 6132
Email: sg@sobenboard.com

PERTH, WA

Soben International (Australia)

Tel: +61 (0)4 1532 3888
Email: jerome@sobenboard.com

Your Local Distributor



SOLE AGENT IN HONG KONG & MACAU REGIONS

Supreme Ecoform Limited

Unit 10B, Chow Shing Kee Commercial Building,
25 Tong Mi Road, Kowloon, Hong Kong
Tel: +852 3741 2689 Fax: +852 3741 2690
Email: info@hkseco.com