Best Building Products Australia

DuraPanel

Introduction

DuraPanel is the highest quality cladding panel designed for contemporary art of architectural application. It is a fully compressed laminated fibre reinforced cement board manufactured with a pre-finish coating – a unique inorganic silicate coating manufactured by the advanced NANO-technology. The advantage of NANO technology is to increase the bond strength of inorganic coating onto the sub-surface of the board. The silicate particle of the paint will penetrate into the board and fuse with the board element to form a homogenous structure that enable its durability. The coated panel is hard and smooth and is easily cleaned by wet cloth without using detergent.

DuraPanel is 100% asbestos free and is resistance to thermal, impact and fire attack. It is weatherproof and will not promote fungi or mould growth and is ideal for use in clean room applications. In short, the panel is designed for hostile environments, such as areas close to the sea, highly polluted inner city/industrial areas, or areas under extremely heavy usage where DuraPanel is the only substance that will remain unaffected.

Unlike other organic coatings found in aluminum or metal cladding, DuraPanel will not emit volatile organic compound (VOC), which is hazardous to health. The board is manufactured to ISO 9001 quality management system and has obtained the China Environmental Labeling issued by China National Environment Protection Bureau, the most stringent requirement in manufacturing business.

Description

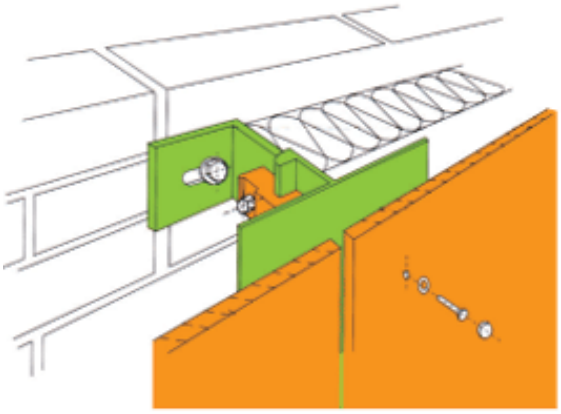
DuraPanel is produced from a medium to high density calcium silicate board coated with a unique inorganic coating under the advanced NANO technology. Under the NANO technology, the silicate particles of inorganic paint are forced into the board and react with the element to form a homogenous structure. The coating is not simply adhered onto the surface like other organic coating does, but fused into the underlay and become part of the board.

In addition to those supreme properties of calcium silicate board, such as dimensional stablility, good resistance of moisture, impact and fire attack, DuraPanel is tough for adverse weather. It is weatherproof and abrasion resistance. The panel will not rot or support fungal growth and is unaffected by UV sunlight and acid rain.

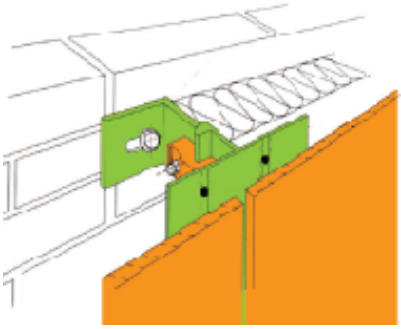
DuraPanel is designed for use in external cladding to replace traditional aluminum and VE panels. The board will not degrade with time and within normal applications, the life of the product is limited only by the durability of the supporting structure and materials used in fastening.

DuraPanel has a wide range of colors to choose with and can be produced with matt, semi-matt, semi-gloss and glossy finishes to suit architects' design. It can also be used in clean room applications or an internal cladding for aesthetic purpose.

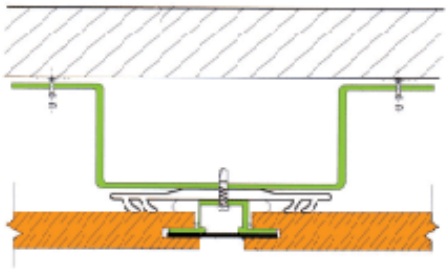
Typical Fixing Method



Fixing by Rivet



Fixing by Adhesive



Fixing of Grooved Panel

Size & Manufacturing Tolerances

Thickness	4, 5, 6, 9 & 12mm
Width	900/1220mm
Length	1800/2440/2700/3000mm

**Other sizes are also available and can be produced to special order

Type	Length (mm)	Width (mm)	Thickness (%)	Squareness (mm/m)
Untrimmed	+/- 5.0	+/- 5.0	+/- 10.0	+/- 2.5
Trimmed	+/- 2.5	+/- 2.5	+/- 10.0	+/- 1.5

Note: DuraPanel are manufactured in two grades, trimed and untrimmed. Untrimmed panels are not necessarily square, and thus cutting at site is normally required. They are usually applicable where the panels are likely to be re-cut into small or shaped pieces. Trimmed panels are factory cut to ensure squareness of panels and straightness of edges and are usually applicable to areas where full size panel are to be installed.

Specific Performance

Density	1350 / 1600 kg/m3
Flexural Strength (along grain)	18/ 25 N/mm2
Flexural Strength (across grain)	24/ 35 N/mm2
Flexural Modulus	11000 / 15000 N/mm2
Moisture Movement (ambient to saturated)	1.6-1.8 mm/m
Moisture content	6 / 5 %
Thermal Conductivity	0.25 / 0.30 W/m.K
Thermal movement (-2°C to +800°C)	0.8 – 1.0 x 10-5 m/m.K
Freeze-thaw test (-25°C to + 25°C)	No alternation
Non combustibility	BS 476: Part 4 GB 8624-1997: GradeA ISO 1182: 1990

Specific Properties


Weatherproof and frost resistance


Good abrasion and impact resistance


Corrosion resistance


Graffiti resistance


Non-combustible


Lightweight but strong


Rot proof, Anti-bacterial, resistance to insects and mould growth

UV resistance


A wide spectrum of color


Maintenance friendly


Economical and easy to use


Acoustic insulation

Application

DuraPanel is applied not only for external building facades and cladding system, but it can also be used in a wide range of internal applications because of its easy working, fixing and self-decorating characteristics. Typical application includes:

- Chalkboard
- Industrial and Biological Clean Room
- Hospital and clinic
- Tunnel and underground linings
- Innovative roofing panels
- High impact and acoustic partitions
- Internal and external walling and cladding
- Bathroom and shower partitions
- Kitchen and Laundries
- Traffic signs and route map
- Sunscreens
- Composite panels
- Sanitary cubicles
- Shop fronts and retail point-of-signage
- Bus shelter and telephone booth cladding
- Switch gear and emergency point covers
- Door cladding