

Introduction

DuraPanel-D is a high quality cladding panel designed for contemporary art of architectural applications. It is a compressed fibre cement reinforced calcium silicate panel manufactured with a pre-finished coating. DuraPanel-D is 100% free from asbestos or sepiolite, and is resistant to thermal, impact and fire attack. It is weatherproof and will not promote fungal or mould growth and is ideal for use in internal and semi-external applications.

Typical building facade panels, for instance, aluminium and VE panels, are designed for commercial use. They are factory made for uniformly geometrical pattern only. Their prices are high and the panels must be installed by specialist contractors. DuraPanel-D fills the void of the market. It is a truly versatile building panel for aesthetic purpose, particularly in interior decoration for use in public amenities, commercial and residential buildings. DuraPanel-D is economical, light in weight, easy to use and maintenance friendly, thus making it a must have for both professional contractors and even DIYers as a whole. It allows architects / designers to use their unlimited creativity. It can be cut easily by wood tools or mechanical cutting devices, making it possible to design individually colourful and various patterns for decorative purposes.

DuraPanel-D is manufactured to ISO 9001 quality management system and ISO14001 environmental management system, and has obtained the Green Product Label Award issued by National Environment Protection Bureau.

Description



DuraPanel-D is produced from a medium to high density calcium silicate panel with a unique, pre-finished PU coating system on both sides of panel before leaving the factory. The coating is applied on the panel by an automatic robot spray device in a dust free spraying plant. The unique resin of coating is dried under a UV curing system to reach the designated linkage itself. Thus its surface is hard, even and smooth. As a result DuraPanel-D is corrosion resistant, UV resistant and easy to clean.

In addition to those supreme properties of compressed fibre cement reinforced calcium silicate panel, such as dimensional stability, good resistance to moisture, thermal and fire attack, DuraPanel-D is tough for impact and adverse weather. The panel will not rot or support fungal growth and is unaffected by UV sunlight and acid rain. DuraPanel-D is designed for interior cladding to replace traditional aluminium and VE panels. The panel 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-D provides users with a wide range of colours and patterns to choose from. It is available in fine and coarse textures and come with matt and semi-gloss finishes.



Size

Thicknesses	6 / 9 / 12mm
Widths	900 / 1200 / 1220mm
Lengths	1800 / 2400 / 2440mm

Note: Other sizes are also available and can be produced to special order.

Colour & Surface Textures

Plain	beige / black / blue / green / grey / white
Patterned	pearly gold / pearly white
Metallic	gold / silver / blue / grey

Note: Other sizes are also available and can be produced to special order.

Standard DuraPanel-D comes with fine texture and semi-gloss finish. Coarse texture is also available for special order.



Manufacturing Tolerances

Edge type	Length (mm)	Width (mm)	Thickness (%)	Squareness (mm/m)
Untrimmed	+/- 5.0	+/- 5.0	+/- 6.0	+/- 2.5

Note: DuraPanel-D is manufactured untrimmed. Untrimmed panels are not necessarily square, and thus cutting at site is normally required, when the panels are likely to be re-cut into small or shaped pieces.

Cutting Methods

DuraPanel-D can be cut by power sawing tools with tungsten carbide or diamond tipped blade. The surface coating should be protected during machine cutting, by means of a suitable smooth base such as MDF or hardboard. For high efficiency and large quantities, the following industrial machine cutting can be applied.

- Guillotine
- Laser cutting
- Water-jet cutting

Fixing Methods

- ▶ Typical mechanical fixing methods work for DuraPanel-D. Provided that substrates are smooth, it can be directly fixed onto walls and ceiling by adhesive methods.



DuraPanel-D with steel framing support

Performance

Density (oven dry)	1420 kg/m ³ +/-6%
Flexural Strength (along grain)	14.0 MPa
Flexural Strength (across grain)	17.5 MPa
Flexural Modulus	11000 N /mm ²
Moisture Movement (ambient to saturated)	0.6 mm/m
Moisture content	6 – 7%
Resistance to continuous heating	80°C
Coefficient of thermal conductivity	0.23 W/m.K
Coefficient of thermal expansion (-20~+80°C)	0.8 X 10 ⁻⁵ m/m.K
Freezing and thawing text (-25°C to + 25°C)	No alternation
Non combustibility	BS 476: Part 4 BS EN ISO 1182:2002
Heat of combustion	BS EN ISO 1716 :2002
Building regulations classification	Euro Class A1
Acoustic reduction	Average 25dB (estimated)

Application

- ▶ DuraPanel-D is applied for internal or semi-external building facades and cladding system. It is versatile, can be used for various applications on amenities, commercial and residential buildings, far beyond imagination because of its easy working, fixing and decorating and self-cleaning characteristics. Typical applications include:

- Decorative façade panels and ceilings
- Decorative wall finishing for kitchen and toilet
- Anti-bacteria wall finishing to clean room and food processing plant
- Shop fronts, signage & billboards
- Underground lining walls
- Beam & column encasements
- Toilet and moveable partitions
- Facing of furniture

Specific Properties



A wide spectrum of color



Lightweight but strong



Acoustic insulation



Maintenance friendly



Corrosion resistance



Non-combustible



Economical and easy to use



Rot proof, anti-bacterial, resistance to insects or mould growth



Good abrasion and impact resistance



UV resistance



Excellent dimensional stability



Weatherproof and frost resistance

Health & Safety

DuraPanel-D is formulated without asbestos or sepiolite or any inorganic fibres. When using power saws or sanders in a confined space, dust extraction equipment is recommended to control dust levels. DuraPanel-D is designed for non-load bearing construction. Horizontal or ceiling panels must not be walked on as they are not designed to take additional load between supports; if there is a risk of this occurring, warning notices should be displayed. Fixers must ensure that they work from adequate and safe platforms where necessary.



Clean Room



Food Processing Plant