

multiclad

GRP sheets for hygienic wall linings

Durable,
hygienic
and easy
to install

- Opaque white glass reinforced polyester (GRP) panels for wall cladding applications.
- Tough, wear-resistant finish
- Non-toxic – compliant with Code of Practice for use in food preparation areas
- Consistent quality and white colour matching
- Unaffected by temperatures between -30°C and $+120^{\circ}\text{C}$
- Lightly embossed surface finish allows effective antiseptic cleaning
- Ideal lining material for use in cold stores, dairies, hospitals, abattoirs, and kitchens
- Colours and UV resistant panels available to special order

FILON[®]

Durable, hygienic, versatile

FILON Multiclad F panels are the ideal solution for internal linings to walls and ceilings where high standards of hygiene are essential requirements. Available in three thicknesses, Multiclad F panels meet a wide range of requirements.

1.2mm thick Multiclad F panels are suitable for use as a surfacing material on bonded panels. 2.0mm and 2.4mm thick panels can be applied direct to ceilings and walls.

To comply with UK Building Regulations, Grade MCE 3 should be specified for walls and ceilings in small rooms not exceeding 30m² in non-residential buildings.

Where rooms exceed 30m² or where they are located in residential buildings, Grade MCE 1 should be used.

Where panels are being used as liners in stairways, corridors or other areas, which may be used as means of escape during a fire, Grade MCE 0 is required.

...and very easy to install

Cutting and Drilling

FILON Multiclad F can be cut cleanly and easily, using a power saw operating at medium speed with a 40/60 diameter diamond grit blade. Drill with standard metal bits. Sheets can be notched using standard metal snips.

Preparing walls

Walls must be dry and free from dirt, grease and dust. Remove any high spots, nails, etc. and fill in any low spots. If walls are badly aligned or have pipes which cannot be removed, fix timber battens to wall to obtain a level surface.

Fitting panels

FILON Multiclad F can be fixed to any solid wall surface, including securely fixed tiles. When positioning panels, allow 6mm spaces at ceiling and floor levels. A 3mm gap should be allowed between each panel and Division Bar. This provides for normal expansion and contraction of panels (see Fig 1).

Around pipes and electrical fittings, allow a minimum of 3mm clearance. Gaps can be filled with sealant to provide protective cover and complete finish. Cut and pre-fit each panel before securing in place.

Panels can also be fitted without a Division Bar. A 3mm gap between each panel should be allowed and sealed with a recommended sealant. This method seals between panels and allows for normal expansion and contraction.

Fixing panels using panel rivets

Mechanical fixing simplifies installation and can reduce labour time. FILON Multiclad F nylon panel rivets can be supplied in varying sizes to suit applications. This type of fixing is advantageous where damp conditions would prevent the curing of adhesives.

Panels should be affixed to walls as shown in Fig 2. Stagger the panel rivets on opposing sheet edges and corners to assist in providing a flat surface. It is recommended that rivet holes are drilled into the panels at 380mm centres, as shown in Fig.5, equidistant from panel edges, and at least 2mm oversize. To achieve correct alignment, mark drill holes on brickwork through panel holes ready for drilling. For best results, secure panels at the top and work to the bottom, or start at centre and work outwards. Do NOT secure panels at both ends working inwards towards centre or overtighten panel rivets, as this may cause them to buckle. Fix top row using panel rivets to suit. Panels should hang freely, allowing the remaining holes to be drilled into wall. Fasten each panel from top to the bottom leaving the leading edge loose to slot Division Bar or Corner Piece onto panel. Complete fastening of leading edge and repeat process for each panel. Fit FILON Multiclad F fittings as required in ceiling, wall and floor corners when fixing panels. Ensure fittings are mitred where they butt against other FILON Multiclad F fittings in corners to provide a quality finish.

Multiclad F extruded plastic fittings

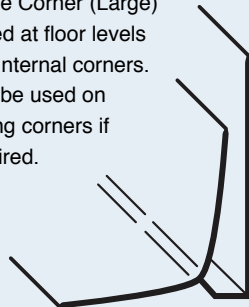
MCF 101

Division Bar (H Section) - used to link panels together



MCF 104

Inside Corner (Large) - used at floor levels and internal corners. Can be used on ceiling corners if required.



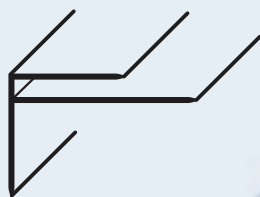
MCF 102

Capping Strip - to finish and protect panel edges where there is no corner fitment



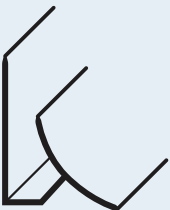
MCF 105

External Corner (F Section)



MCF 103

Inside Corner (Small) - for ceiling corners



Glass filled nylon panel rivet
6.5mm diameter in lengths from 12.7mm to 152.4mm





Multiclad provides an ideal solution for applications as diverse as pedestrian tunnel walls and food manufacturing plants.

Fixing Panels using adhesives (interior use only)

To improve flatness and reduce movement, a good quality adhesive may be used in conjunction with mechanical fixing. The use of adhesives can also reduce the number of panel rivets by increasing vertical spacing of rows to 570mm, thereby eliminating one row of panel rivets per panel. When using adhesives, ensure that surface of walls are free of moisture, dirt, dust, grease, etc. Apply around outer edges on the back of each panel in vertical lines as shown in Fig 3a, spotting between lines to improve bonding. Alternatively to ensure full contact with surface, apply 100% coverage to reverse of sheet as shown in Fig 3b. Note : Do NOT apply adhesive horizontally across panel as falling brickdust may cause it not to adhere to wall. Filon Products can supply an adhesive suitable for fastening FILON Multiclad F panels to most surfaces, which does not retain odours in food storage areas. Please ensure manufacturers instructions are followed when using any adhesives.

Sealing

To aid moisture proofing when fixing FILON Multiclad F panels, a good quality silicone sealant should be used. Filon Products can supply a sealant that is approved for use in food preparation areas by The Food Research Association. Please follow the manufacturer's instructions when using any sealant. Holes drilled in brickwork should be filled with sealant prior to inserting panel rivets. When installing panels apply sealant to Division Bar slots, as shown in Fig 4, and push into place. To allow for expansion withdraw slightly by 3mm (see Fig 1). All FILON Multiclad F plastic fittings should be sealed in this way to ensure effective proofing of joints and holes. To complete the proofing, apply sealant to all edges of the panel. In wet areas, an extra bead of sealant should be applied behind panel edges to further aid moisture proofing.

Cleaning

During installation tooling may cause marks to appear on panels and fittings. These marks can be easily removed by using a liquid metal polish like 'Brasso'. During use it is recommended that FILON Multiclad F be cleaned on a regular basis to prevent build-up of soiling and retain its appearance. The product can be cleaned by steam or chemical methods in general use, or simply hosed down with water.

Fig 1. Fitting panels

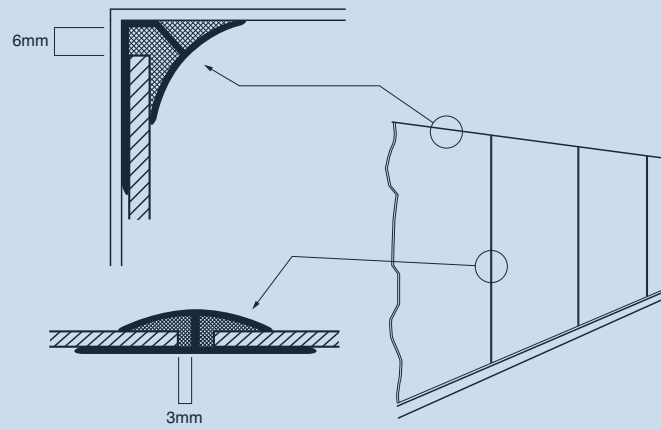


Fig 2. Fixing with panel rivets

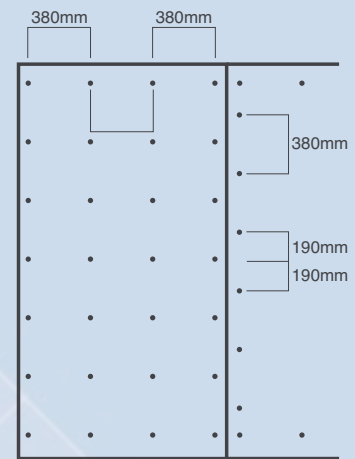


Fig 3. Fixing with adhesives

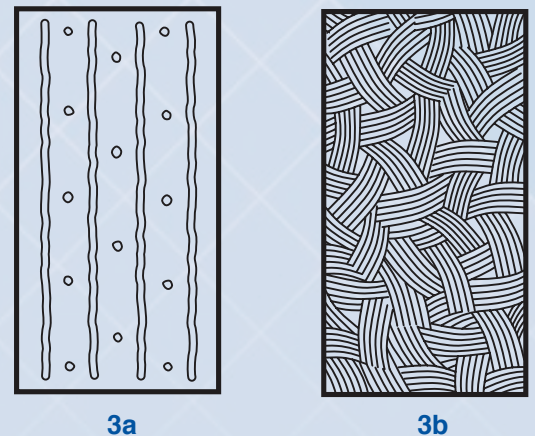
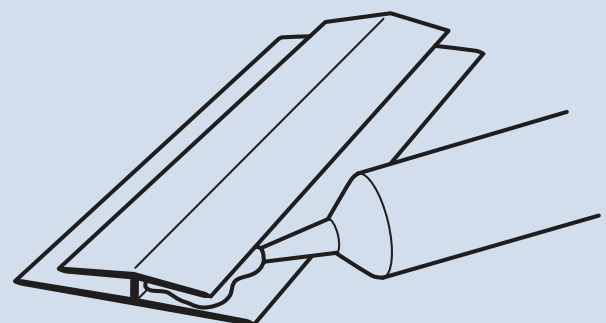


Fig 4. Sealant application



Multiclad F Technical information

Standard product range

Colour: white

Thicknesses: 1.2mm; 2.0mm; 2.4mm

Panel sizes: 1220mm x 2440mm; 1220mm x 3050mm

Also available in coils of 150m x 1220mm

Non-standard colours and sheet sizes can be supplied to special order.

Manufacturing Tolerances

Multiclad F panels are manufactured as standard to the following tolerances:

Widths : + 0mm to - 2mm

Lengths up to 5.5 meters : - 0mm to + 6mm

Special tolerances can be supplied to special order.

Structural and Mechanical Performance – typical values

Tensile Strength:	80N/mm ² (BS 2782 Part 3)
Flexural Strength:	200N/mm ² (BS 2782 Part 3)
Flexural Modulus:	4KN/mm ² (BS 2782 Part 3)
Bolt Shear:	500N+ at (BS 4154) 2mm thickness
Hardness:	Barcol 50
Thermal Conductivity (K):	0.15 W/m°C
Coefficient linear expansion:	20 x 10 ⁻⁶ /°C
Density:	1.6g/cm ³
Panel Weight (Nominal)	1.2mm thick 1.83kg/m ² 2.0mm thick 3.06kg/m ² 2.4mm thick 3.66kg/m ²

Operating Temperatures

Multiclad F panels may be used in applications with temperatures between – 300°C and +1200°C. They will not become brittle at low temperatures.

Effects of Chemicals

Multiclad F panels suffer no chemical reaction with other commonly used construction materials.

Liquids

Multiclad F panels have been tested for water absorption. This has been recorded as 0.25% after 24 hours at 200°C.

Biological

Multiclad F panels are resistant to attack by micro-organisms and fungi.

Fire performance

Multiclad F panels have been tested under BS 476: Part 7 'Surface Spread of Flame Test for Materials', and have been rated as follows :

Grade MCE 3 - Rated Class 3

Grade MCE 1 - Rated Class 1

Grade MCE 0 - Rates Class 1*

Grade MCE 0 panels have been tested under BS 476 Part 6 'Fire Propagation Test for Materials'.

By definition under UK Building Regulations MCE 0 panels are designated Class 0.

NB: Due to differing chemical additives, FILON Products cannot guarantee colour matching between different fire resistant grades.

Storage

Multiclad F panels should be stored flat (never on end) on a clean, flat level surface. Panels should be preconditioned in proposed working environment for at least 72 hours before installation.

Health & Safety

Health & Safety procedures for working with GRP should be observed at all times. For details, please contact FILON Products.

FILON®

Filon Products Limited

Unit 3, Ring Road, Zone 2, Burntwood Business Park
Burntwood, Staffordshire WS7 3JQ, England

Tel: +44 (0)1543 687300

Email: sales@filon.co.uk

www.filon.co.uk

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