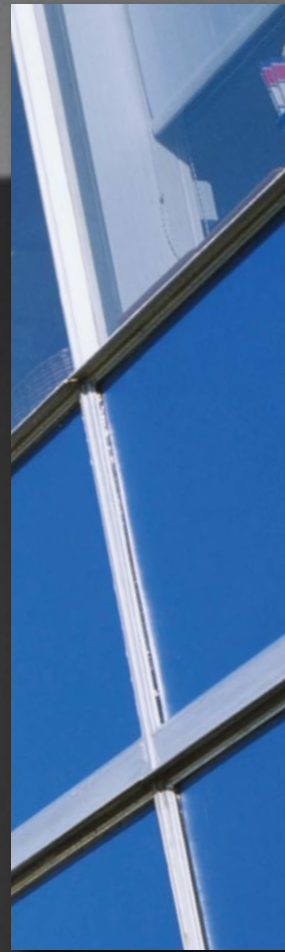


architectural cladding



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- 8 Vulcathermic™ Insulated panels
Vulcaboard™ Non-insulated panels
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introduction

Vulcan Cladding Systems have used the adaptability of GRP to suit the range of cladding and infill panels. Our experience will make full use of the possibilities offered with GRP.

GRP (Glassfibre Reinforced Plastic) consists of a matrix of polyester resin reinforced with filaments of glass fibre. The characteristics of GRP vary depending on the glass and resin type used in manufacture. By combining GRP with other materials it can be suited to many different applications. Proof of its versatility is its use in marine construction, motor vehicle bodies, drainage and guttering pipes, septic and interceptor tanks, architectural feature work and cladding, to name but a few.

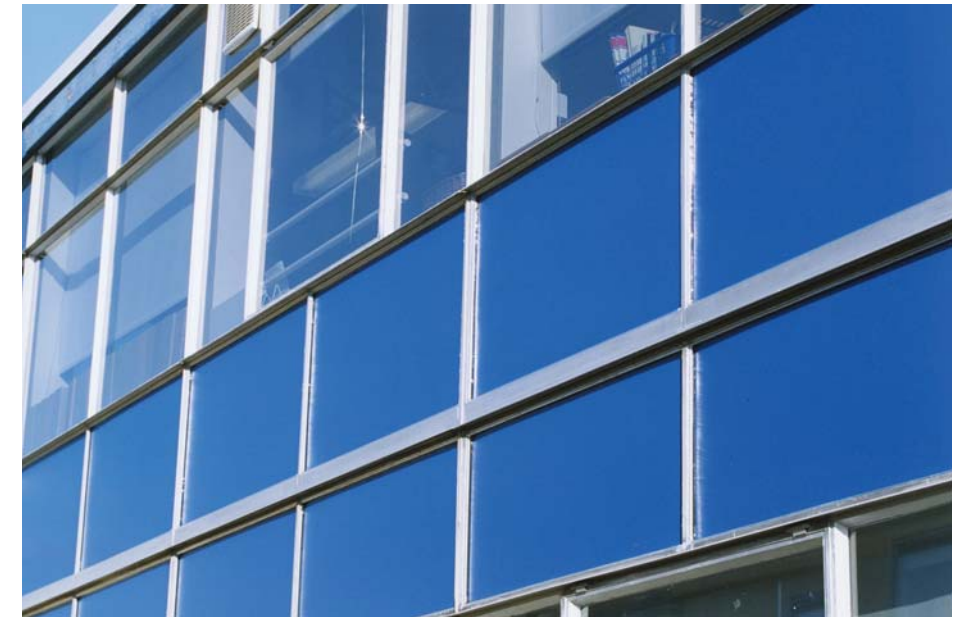
We also specialise in:

Weatherboard systems:

- *Extruded aluminium:*
VulcaLap® ppc / anodised
- *Engineered woodgrain timber:*
WeatherTone® finished
RANGEWOOD® primed

Architectural Treads:

- Brass, Stainless
& Aluminium profiles
- Stud Tactile range
- GRP safety treads,
panels & tactiles



why GRP?

The ideal material

Properties and benefits of GRP

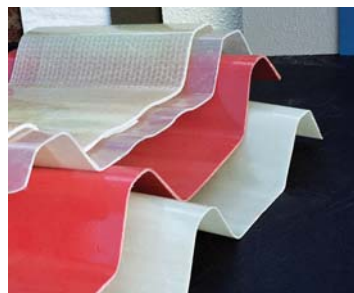
- GRP can be moulded with virtually any texture, any colour and to almost any shape.
- GRP is a strong, lightweight material with high impact resistance.
- Fire retardant resins can be used to achieve good fire ratings.
- GRP laminates with an isophthalic gel coat have excellent weathering properties, chemical resistance and are unaffected by water.
- Standard GRP has a co-efficient of expansion of 30×10^{-6} similar to aluminium and across the average UK temperature range it will move approximately 1.2mm/m.
- When woven glass reinforcement is used, GRP has a co-efficient of 15×10^{-6} which is similar to steel.
- GRP is a thermosetting plastic and is unaffected by extremes of temperature. Unlike thermoplastics (e.g. PVCu) GRP will not become brittle in the cold or soft in the heat.
- Colour fastness and resistance to UV light are ensured with the use of isophthalic gel coats which achieve a reading of 6 to 7 on the BS 1006: 1978 colour fastness test.
- A 'through colour' can be achieved with pigmented polyester resin in the GRP laminate disguising any surface scratches.
- Other materials such as non-combustible board and thermal insulation may be used in conjunction with GRP offering the specifier further beneficial properties.
- GRP has a low maintenance surface. Graffiti can be easily removed from the surface with the use of non abrasive graffiti removers.
- The manufacture of GRP is largely a non-automated process and thus uses low amounts of energy. (Heat, electricity, light, water).

Our cladding panel range is produced using GRP, however, optional facings can be used in the Vulcathermic™ and Vulcaboard™ composite panels to suit particular design or budget, such as **Plastisol, Aluminium and Trespa sheets.**





Balcony panels bolted to lugs as detail (b) page 10. Also **WeatherTone**® prefinished timber shiplap in walnut.



Many different profiles and colours available.



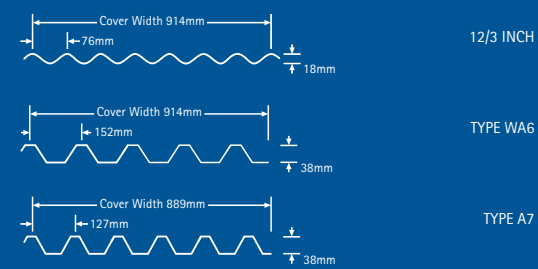
Moulded curved Vulcalucent®.

Vulcalucent™ GRP profiled roof and wall cladding

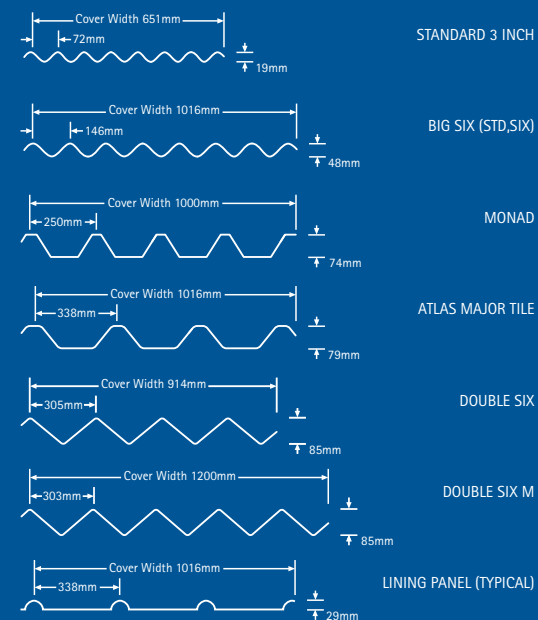
Available in:

- Translucent clear
- Tinted
- Coloured

To match asbestos profiles



To match metal profiles



Note: Many more standard profiles are available

Product Range

Flat Vulcalucent™ panels are available in a choice of sizes, up to a maximum 5000 x 1520mm. Thicknesses range from 2mm to 8mm, depending on panel fixing centres.

Vulcalucent™ translucent panels offer a choice of smooth or crinkled surface textures and can be supplied with a colour tint and wire mesh reinforcement if required.

Vulcalucent™ corrugated panels are available up to a maximum size of 8000 x 1200mm, in a variety of profiles and thicknesses and colours.

Manufacture

Vulcalucent™ GRP panels are manufactured using embossed polyester film, light stabilised polyester resins and E type glass fibre with resin rich surfaces.



Blue tint Vulcalucent®.

Vulcalucent™

Strong and translucent for safety and visibility

Properties

- Light transmittance: 65-85%
- Modules in bend: 7 GN/m²
- Tensile strength: 100 MN/m²
- Fire Rating to Building Regs: Class 0 to Class 3
- Thermal conductivity: K= 0.2 W/mK
- Thermal transmittance (6mm): U= 5.36 W/m²K
- Temperature range: -30°C to 100°C
- Thermal expansion: 30 x 10⁻⁶
- Weatherability: High resistance
- Lightfastness: UV stabilised
- Weight: 1.8kg/m² per mm thickness
- Fixing centres: Support spacing

Installation

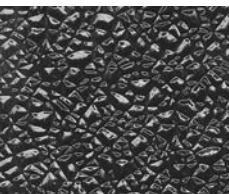
Though fixing is usually direct to the substructure, Vulcalucent™ can be glazed into frames using beads and sealant or gaskets. The panels can be cut, shaped and drilled on-site if required. Shallow crinkle surfaces should be installed facing the UV light.

Maintenance

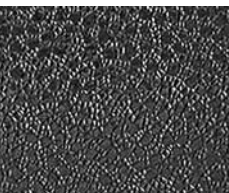
Vulcalucent™ panels should require no maintenance, except cleaning, in the first 30 years of life. To ensure panels are maintained in good condition, bi-annual cleaning using warm soapy water is recommended.

Warranties

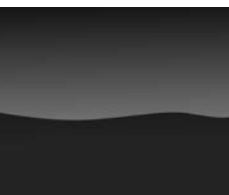
Vulcalucent™ has warranty against more than 10% reduction of light transmission for 10 years, subject to correct installation.



Deep crinkle



Shallow crinkle



Smooth gloss



Deep crinkle texture double sided Vulcatuf® fixed with powder coated aluminium black beads, as detail (g), page 11

refurbishment



Double sided blue Vulcatuf® in white aluminium surround, as detail (f), page 11



Vulcatuf® screwed to timber frame

new build



Vulcatuf® riveted to steel lugs as detail (b), page 10



Vulcatuf® fixed with powder coated aluminium caps as detail (d), page 11

Composition

Vulcatuf® has an external coloured isophthalic gel coat (for good chemical and weather resistance) backed with polyester resin and special glass fibre reinforcement.

Product range

They are single or double-sided and available in a choice of sheet sizes up to a maximum 5000 x 1530mm. Thicknesses range from 2mm to 8mm, with a choice of smooth matt surface or anti-vandal textures, Vulcatuf® panels are pigmented throughout the laminate to all BS. 4800 colours.

Manufacture

Vulcatuf® is a solid GRP panel that may be laminated with woven glass reinforcement for higher impact resistance and reduced thermal movement.

Vulcatuf®

Anti-vandal panels

Properties (woven glass reinforced)

- Modulus in bend 15 GN/m²
- Tensile strength 250 MN/m²
- Fire rating to building regs 0-3
- Thermal conductivity K=0.2 W/mK
- Thermal transmittance (6mm) U=5.36 W/m²K
- Temperature range -30C to 100°C
- Thermal expansion 15 x 10⁻⁶
- Weatherability High resistance
- Lightfastness BS 1006: 1990
- Weight 1.8kg/m² per mm thickness
- Fixing centres Support spacing can be recommended at enquiry stage
- Complies with: BS. 5544, resistance to manual attack BS 6206, impact performance of safety plastics

Installation

Vulcatuf® panels may be face fixed directly to steel or timber without the risk of differential thermal movement and quilting. Alternatively Vulcatuf® can be glazed in the traditional way using beads and sealant or gasket. The panels can be cut, shaped and drilled on-site if required.

Maintenance

Vulcatuf® panels should require no maintenance, except cleaning, in the first 30 years of life. To ensure panels are maintained in good condition, bi-annual cleaning using warm soapy water is recommended.

Warranties

Panels unaffected by sunlight apart from slight mellowing. 10 year warranty against significant colour change.



Vulcatuf® screwed to timber frame on soffit, fascia and barge board



Curved fascia using Vulcatuf®

VULCAN



GRP faced 28mm thick infill panels
Class 1 FR grade



GRP faced 24mm thick infill panels



Trespa faced 32mm thick with white plastisol rebated inside face and
16mm thick edges



Plastisol steel faced 28mm thick with outside face reinforced with 4mm plywood

Plastisol steel FR, plywood core, drip rail, parapet capping and powder coated aluminium caps as detail (d), page 11



Composition

Vulcathermic™ panels are of sandwich construction with a Styrofoam insulation and or plywood core and bonded together to form a structural panel able to span large areas. Maximum size 5m x 1.5m. Any thickness, any 'U' value, pressure bonded, stable.

Product range

- Vulcathermic™ with Styrofoam core and GRP, Plastisol, Aluminium and Trespa
- Vulcaboard™ with WBP plywood core and GRP, Plastisol, Aluminium and Trespa

Vulcathermic™

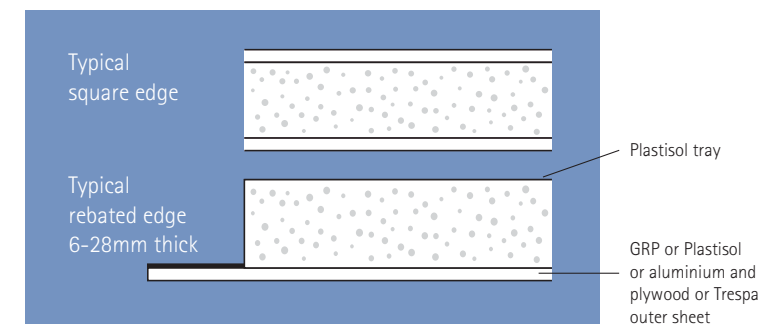
Insulated composite panels

Vulcaboard™

Non-insulated composite panels

Properties Styrofoam insulation core

- Good compressive strength 300KN/m²
- Thermal conductivity 'K' value 0.027 W/mK
- Low water absorption 0.2%
- Self extinguishing BS. 3837 part A
- Hot wire cut to thickness required +/- 0.5mm



Installation

Panels are glazed in the same manner as double glazing units, using glazing blocks, distance pieces, non setting mastic, glazing beads and studs.

Maintenance

Panels should be washed with warm soapy water when dirty. No other maintenance is required.

Warranties

Panel integrity with no significant colour change for 10 years, subject to correct installation, and manufacturers' recommendations.



PPC aluminium door infill panels

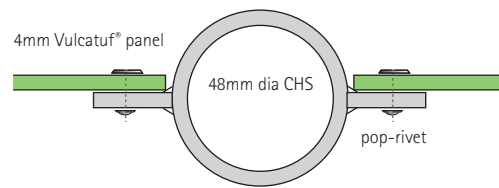
Vulcalucent™ and Vulcatuf™ Fixed to steel lugs



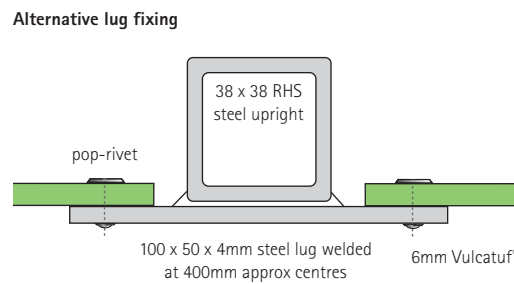
Vulcatuf® fixed directly to steel framework



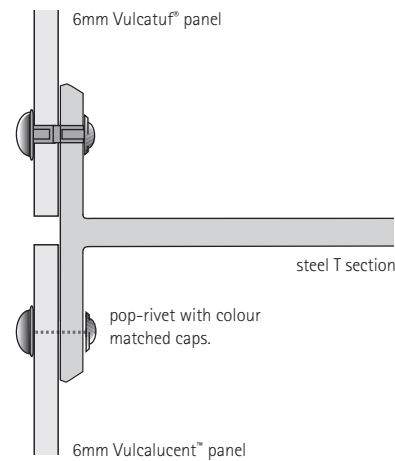
Vulcalucent® canopy; Vulcalucent® and Vulcatuf® balcony panels



(a)



(b)

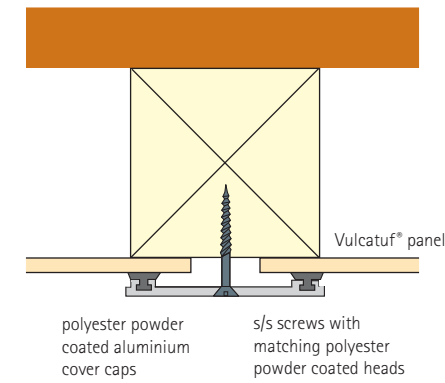


(c)

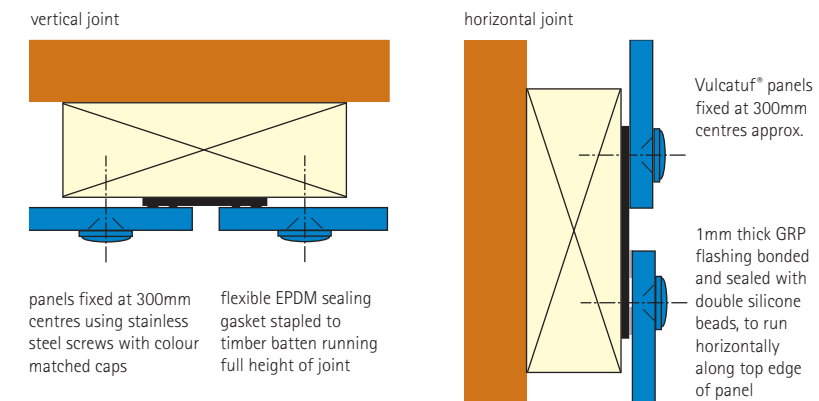


Vulcatuf® fixed as detail (c)

Timber fixing (d)

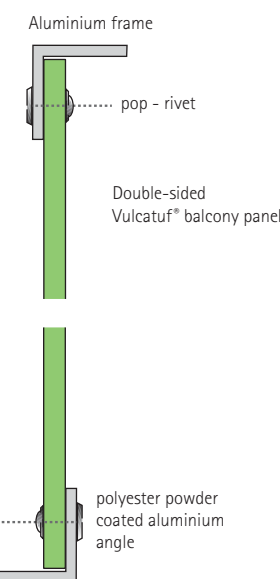


Alternative details with open joints (e)

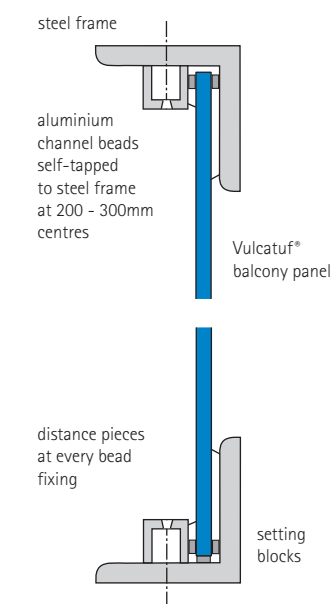


Balcony infill panels

Vulcatuf® stiffened with aluminium frame (f)

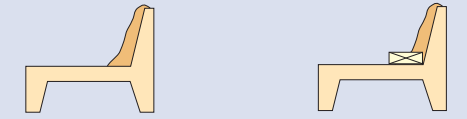


Vulcatuf® detail using channel beads (g)



Vulcathermic™

Fixing to W20 steel window Vulcathermic™ panel studs and beads



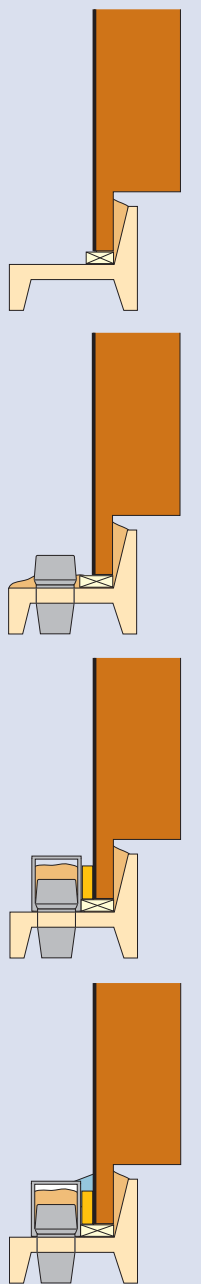
1. Prime before glazing ensuring frame is dry and thoroughly clean. Apply 3mm x 12mm strip butyl backing mastic
2. Positioning setting blocks on cill only

3. Press in panel and cut off surplus back mastic on table of section

4. Tap in poststuds and set for correct sheet thickness. Apply fillet of gun grade mastic

5. Snap on bead. Caulk in 6mm x 6mm foamed polyethylene strip

6. Prime panel with cleaning solvent and apply polysulphide sealant to BS. 4254



VULCAN

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