

## Characteristics

### INTRODUCTION

The VITRAGROUP-exclusive coating systems, VITRATHANE 643 and VITRAFLON 700, feature a number of unique characteristics. For more information consult the technical section of this manual.

#### GRAFFITI RESISTANT

Graffiti and chemical resistance allows for quick and economical removal without effecting the glazed surface. Ideal for tunnels, bridges, train stations, bus shelters, educational and public buildings, and other "targeted" structures. No repainting or high pressure water blasting is required.



#### WEATHER/U.V. RESISTANT

Unique thermosetting factory finish withstands long-term exposure to dramatic changes in weather, including extreme temperatures such as those experienced in tropical equatorial regions and sub-Arctic environments. Provides lifetime resilience.



#### BACTERIA & MOULD RESISTANT

Tough glazed coating on panel front and edges prevents the adhesion or growth of bacteria and mould. Easy to keep clean. Ideal for hospitals, clinics, laboratories, food preparation areas, kitchens and abattoirs demanding the strictest hygiene levels.



#### POLLUTION & GRIME RESISTANT

Resistant to pollution and industrial grime and mildew. Impervious to chemicals, solvents and cleaning agents. Requires minimal maintenance to keep an as-new appearance.



#### IMPACT RESISTANT

Ceramic-like surface withstands being bumped or accidentally knocked by foreign objects.



#### COLOUR FADE RESISTANT

VITRAGROUP coatings continue to keep their as-new appearance for decades. Won't fade, blotch, or ripple.



#### ACOUSTIC QUALITIES

High soundproofing ratings - ideal for airports, public transport stations, schools, universities, hospitals, commercial facilities, etc.



#### UNLIMITED COLOUR RANGE

Thousands of standard, metallic, rainbow fleck, pearl, "flip" pearlescent and custom image graphic designs to choose from!



## *Vitrapanel*<sup>®</sup>

### PRE-FINISHED COMPRESSED FIBRE CEMENT

#### THE CONCEPT:

Modular building and curtain wall cladding using rugged, inert, stable compressed fibre cement panels, pre-coated under hygienic factory conditions with VITRATHANE<sup>®</sup> or the "PLATINUM Selection", VITRAFLON 700<sup>®</sup>.

#### APPLICATION:

Fascia/Façade systems (flat or curved)  
Curtain wall infill panels  
Shopfront and glazing infill panels  
Sunblade and sunhood panels  
Soffit and eaves linings  
Double sided balustrade panels  
Column cladding  
Blade walls  
Spandrel cladding  
Lift lobby and escalator wall panelling  
Kitchen splashbacks  
Awning roof panels  
Table tops and bar fronts  
Signage systems

#### COLOURS:

VITRAGROUP range of standard colours  
Silver fleck metallic colours  
Broad range of pearl effects including "flip" pearlescents  
Rainbow fleck metallic colours  
Stripes or patterns available in multiple colours  
Custom image graphic designs

#### FEATURES:

Range of standard sizes up to 1200mm x 3000mm  
Range of standard thicknesses  
High sheen satin finish is recommended  
Semi gloss and full gloss available (lighter colours)  
Reduces need for on site trades  
Obviates the hazards of on-site painting including: -  
Dust  
Inclement weather (lost time)  
Cost of scaffold  
Contamination of nearby sensitive surfaces

#### SERVICABILITY:

Graffiti resistant  
Scratch and abrasion resistant  
Mould and bacteria resistant  
Very easily cleaned in the course of cyclic maintenance  
VITRATHANE<sup>®</sup> AND VITRAFLON<sup>®</sup> Platinum selection being 'thermosetting' with non- static properties prevent atmospheric grime and fallout becoming ingrained in the film. It is thus self-cleansing.  
Will accept sign writing  
Can be easily over painted for an aesthetic colour change

#### GUARANTEE:

VITRATHANE<sup>®</sup> AND VITRAFLON<sup>®</sup> Platinum selection retains permanent flexibility and adhesion, and under normal conditions will not crack or delaminate from the substrate  
Ten (10) year standard warranty covers the longevity of the coating system. Project specific warranties available on request

#### INSTALLATION:

Please consult the manufacturer/agent for the most appropriate method of installation for your application.

#### APPROVAL:

Samples each at least 200mm x 200mm are to be supplied for each colour. These must have an approval signature by the supervising architect and be returned to the manufacturer prior to commencement of production.

#### DISCLAIMER:

Since the use and application of this product is beyond our control we cannot be held responsible for product field performance. The information represented above is the result of our considerable experience with this product but is not to be construed as a performance warranty.

## *Platinum Selection - Vitraflon 700®*

### **FLUROPOLYMER BASED FINISH**

#### **DESCRIPTION:**

VITRAFLON 700® represents a break-through in the fluropolymer technology. Largely through the genius of international resin research, the fluropolymer has been modified to render it compatible with a wide range of durable and stable colour pigments and also to enable application to a range of substrates besides aluminium. This creates extra long life cladding with an unlimited colour spectrum.

#### **FEATURES:**

##### **Excellent weather resistance**

After being exposed to a 10,000 hour accelerated weathering test using the sunshine Carbon Arc Weatherometer, VITRAFLON® will retain more than 80% of its original gloss. VITRAFLON® not only protects substrate materials for years but also secures the long lasting beauty of their colour surfaces.

##### **Colour adaptability**

Now architects can exploit fluropolmer's unique weathering performance in the colour or colour combination of their choice. No longer the limited range on offer on aluminium panels.

##### **Use areas**

VITRAFLON 700® is applicable on exterior cladding panels wherever long-term maintenance-free life is an essential consideration. Where a best quality polyurethane may be expected to contribute aesthetically to a structure for in excess of 10 years, VITRAFLON 700® may be relied upon to extend this time frame by at least 100%

It is available in gloss, satin, metallic or pearl. The satin (45±5% gloss) is preferred for building exteriors to minimise glare.

##### **Abrasion resistance**

Excellent resistance to scrubbing and sand abrasion

##### **Chemical resistance**

Excellent resistance to organic and inorganic acid

Good resistance to alkalis

Excellent resistance to water-splash and immersion

##### **Solvent resistance**

Excellent resistance to solvents, petrol and oils

##### **Flexibility**

Permanent flexibility has been built into the fluropolymer. It will never embrittle.

##### **Dirt pick-up**

VITRAFLON 700® has very low surface energy consequently dirt does not readily adhere to its surface i.e. it has an excellent 'self-cleaning' characteristic.

## *Graffiti*

### HOW TO REMOVE GRAFFITI FROM VITRAGROUP PRODUCTS

#### INTRODUCTION

VITRATHANE® and VITRAFLON 700®, as the final finishes on VITRAGROUP products, exhibit excellent graffiti resistance due to their specialised formulations. The following procedures should be closely adhered to.

#### GRAFFITI REMOVAL

The graffiti should be removed as soon as possible after application. There are two reasons for this – first, it lifts easiest when still not cured, second, the "artist" is frustrated by early removal of his handiwork and will be less likely to repeat it.

Felt Tipped Marker Damage will lift quite easily using METHYLATED SPIRITS. Simply wipe over with saturated rag or paper tissue and repeat till all stain has disappeared.

Pressure Pack Sourced Paint will not respond to methylated spirits but will to MINERAL TURPENTINE. Again, continue to wipe over till all stain has disappeared.

Exotic Marker or Paint – it is possible that an exotic marker will be used to deface a VITRAGROUP product. If neither methylated spirits or mineral turps is effective, Graffiti Remover is available at most hardware stores and is very likely to be effective.

All graffiti can be cleaned off easily using "Graffiti Remover" available at most hardware stores.

## Vitrapanel®

### STANDARD SIZE CHART

#### VITRAPANEL® EXTERIOR : Compressed Fibre Cement

	WIDTHS	LENGTHS					
4.5mm	1200	-	-	-	-	-	3000
6mm	900	-	-	-	2400	-	3000
	1200	-	-	-	2400	-	3000
9mm	900	-	1800	2100	2400	2700	3000
	1200	-	1800	2100	2400	2700	3000
12mm	900	-	-	-	2400	-	3000
	1200	-	-	-	2400	-	3000
15mm	900	-	1800	2100	2400	2700	3000
	1200	-	1800	2100	2400	2700	3000
18mm	900	1500	1800	-	2400	-	3000
	1200	-	1800	2100	2400	-	3000
24mm	1200	-	-	-	2400	-	-

#### VITRAPANEL® INTERIOR :Medium Density Fibreboard

	WIDTHS	LENGTHS						
9mm	900	1800	2100	2400	2700	3000	3300	3600
	1200	1800	2100	2400	2700	3000	3300	3600
12mm	900	1800	2100	2400	2700	-	-	3600
	1200	1800	2100	2400	2700	-	-	3600
18mm	900	1800	2100	2400	2700	-	-	-
	1200	1800	2100	2400	2700	-	-	-

**NOTE:** Panels can be custom made to any size under maximum standard size (surcharge applies).

## Technical Report

### VITRATHANE/VITRAFLON FINISHES COMPARED TO ACRYLIC

- Identifying key differences between "thermosetting" paint finishes (i.e. VITRATHANE and VITRAFLON) and "thermoplastic" finishes (i.e. emulsion or water based acrylics)

VITRATHANE and VITRAFLON are the long-life finishes unique to VITRAGROUP. They outperform acrylic finishes in a number of important areas including:

- being affected by heat (i.e. the sun)
- entrapment of dirt and grime
- loss of as-new colour
- mildew and mould growth
- colour fade

#### IMPERVIOUS TO HEAT

VITRATHANE and VITRAFLON react - or "cross link" - irreversibly as the result of a chemical reaction created by the mixing together of two components. Once this reaction or cross linking is complete the coating is set and cannot be disturbed or softened by heat from the sun, etc. In direct contrast, acrylic or thermoplastic coatings dry simply by evaporation of the solvent - in this case, water - and the dried film is sensitive to heat changes.

#### RESISTANCE TO GRIME

If placed in identical environments, thermosetting and thermoplastic paint films will receive the same levels of heat from the sun and similar amounts of atmospheric fallout such as dirt, grime, etc. The major difference is that both VITRATHANE and VITRAFLON

films merely carry dirt and grime until a rain shower washes it off, restoring the coating to its original as-new appearance. They are "self cleaning".

When a thermoplastic film is softened by the sun's heat, dirt will penetrate inside it. Then, the chilling effects of a rain shower lock that grime into the film. Over time the paint becomes increasingly soiled and loses its aesthetic value. Additionally, the locked-in grime will increase the rate of colour fade.

#### MOULD-BACTERIA RESISTANT

VITRATHANE and VITRAFLON coating systems do not contain nutrients which growths such as mould and lichen feed on. As such, VITRAGROUP products are not affected by either of these problem growths. However, thermoplastic films contain cellulosic ingredients which are known food for mould and lichen. Subsequent multiplication of these growths affects their long-term appearance, aesthetic value, and can compromise colouring.

#### CONCLUSION

VITRATHANE and VITRAFLON coating systems have been formulated to preserve an as-new appearance forever. In addition to the superior characteristics documented above they also feature resistance to:

- graffiti
- pollution
- colour fade
- extreme weather conditions
- chemicals, solvents and cleaning agents
- being knocked or bumped by foreign objects

### COMPARISON REPORT ON VITRAPANEL AND OTHER PRODUCTS

PROPERTIES	SITE APPLIED ACRYLIC ON COMPRESSED FIBRE CEMENT	VITRATHANE COATED VITRAPANEL	VITRAFLON COATED VITRAPANEL 'PLATINUM' SELECTION	ALUMINIUM COMPOSITE PANEL
Generic Finish Type	Thermoplastic - cures by water evaporation then dispersion coalescence	Thermosetting - cures by irreversible chemical reaction	Thermosetting - cures by irreversible chemical reaction	Thermosetting - cures by irreversible chemical reaction, usually by baking
Film properties	Relatively soft, sensitive to heat, absorbs graffiti, dirt, grime, combustion gases etc	Relatively hard, smooth, insensitive to heat, dirt etc remains on surface only	Smooth, hard, insensitive to heat, dirt etc remains on surface only	Smooth, hard, insensitive to heat, dirt etc remains on surface only
Clean-up properties	Film progressively discolours as dirt etc is absorbed	Film cleans to original appearance when exposed to rain or mechanical washing	Film cleans to original appearance when exposed to rain or mechanical washing	Film cleans to original appearance when exposed to rain or mechanical washing

## Technical Report

### COMPARISON REPORT ON VITRAPANEL AND OTHER PRODUCTS

Impact resistance	Very good	Excellent	Excellent	Poor resistance to impact. Scratches more easily than VITRAPANEL
Colour stability	Usually fades quickly. Gets progressively dirtier in time	Original colour maintained long term, approximately 10-20 years life expectance often even longer	Original colour maintained long term, approximately 30-50 years life expectance often even longer	Pvdf has shorter life expectancy than the VITRAFLOX coated VITRAPANEL
Graffiti resistance	Very poor - graffiti is absorbed by the porous film. Cannot be cleaned off, repainting necessary often with bad colour matching	Very good - graffiti is merely carried on the surface hence can be easily and completely wiped off with suitable agents	Very good - graffiti is merely carried on the surface hence can be easily and completely wiped off with suitable agents	Very good - graffiti is merely carried on the surface hence can be easily and completely wiped off with suitable agents
Application methods	Can only be applied on site, too soft for factory application, brush/roller leaves tracks and varying disfigurement, mostly low sheen texture, often no/poor edge treatment	Can only be factory applied under controlled and environmentally safe conditions, robot applied for utmost consistency and smoothness, edges treated as per face, panel is back sealed for long term performance	Can only be factory applied under controlled and environmentally safe conditions, robot applied for utmost consistency and smoothness, edges treated as per face, panel is back sealed for long term performance	Coil coating procedure - factory applied
Installation	Usually countersunk screws covered by filler which can 'pop' with movement	Several options of face fixing or concealed fixing for discreet, expressed or hidden systems	Several options of face fixing or concealed fixing for discreet, expressed or hidden systems	Several options of face fixing or concealed fixing for discreet expressed or hidden systems
Aesthetic properties	Reasonable initially colour wise - progressive deterioration due to dirt entrainment, mould growth and fade	Initial good high-sheen appearance maintained year after year - 10 year performance warranty, any colour metallics and pearls	Initial good high-sheen appearance maintained year after year - project specific warranty, any colour, metallics and pearls	Initial good high-sheen appearance maintained year after year various warranties available, small colour range due to coil coating limitations
Maintenance	Recoating usually needed every 4-5years	Inexpensive cleaning should be undertaken annually, recoatable at any time	Inexpensive cleaning should be undertaken annually, recoatable at any time	Inexpensive cleaning should be undertaken annually, recoatable at any time
Initial cost investment	Standard panel \$45/m <sup>2</sup> . Installed and painted approximately \$140/m <sup>2</sup>	Standard panel \$75/m <sup>2</sup> . Approximately \$180/m <sup>2</sup> installed, convention fixing	Standard panel \$85/m <sup>2</sup> . Approximately \$190/m <sup>2</sup> installed, conventional fixing	Standard panel \$75/m <sup>2</sup> . Approximately \$280/m <sup>2</sup> installed, conventional fixing
Initial cost investment	Standard panel \$45/m <sup>2</sup> . Installed and painted approximately \$140/m <sup>2</sup>	Standard panel \$75/m <sup>2</sup> . Approximately \$180/m <sup>2</sup> installed, conventional fixing	Standard panel \$85/m <sup>2</sup> . Approximately \$190/m <sup>2</sup> installed, conventional fixing	Standard panel \$75/m <sup>2</sup> . Approximately \$280/m <sup>2</sup> installed, conventional fixing
Maintenance cost	Recoating @ \$15/m <sup>2</sup> every 5 years	Annual wash @ \$0.50/m <sup>2</sup>	Annual wash @ \$0.50/m <sup>2</sup>	Annual wash @ \$0.50/m <sup>2</sup>
15 Year cycle	=\$45/m <sup>2</sup> Total Cost \$185.00/m <sup>2</sup>	=\$7.50/m <sup>2</sup> Total Cost \$187.50/m <sup>2</sup>	=\$7.50/m <sup>2</sup> Total Cost \$197.50/m <sup>2</sup>	=\$7.50/m <sup>2</sup> Total Cost \$287.50/m <sup>2</sup>
40 year cycle	=\$120/m <sup>2</sup> Total Cost \$260/m <sup>2</sup>	Washing \$19.50/m <sup>2</sup> Recoating \$20.00/m <sup>2</sup> Total Cost \$219.50/m <sup>2</sup>	Washing \$19.50/m <sup>2</sup> Total Cost \$209.50/m <sup>2</sup>	Washing \$19.50/m <sup>2</sup> Total Cost \$299.50/m <sup>2</sup>

The Above information is general and prices based on average current market conditions at 08/2001

## *Maintenance Exterior*

### **MAINTENANCE PROCEDURE**

#### **INTRODUCTION**

VITRAGROUP exterior products combine various substrates with the unique VITRATHANE® or VITRAFLON® coating technologies to produce low maintenance cladding. To ensure optimum decorative life from VITRAGROUP products the following procedure is recommended.

#### **DISCLAIMER:**

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#### **PROCEDURE**

##### **Annual Cyclic Maintenance:**

VITRAPANEL® when used as exterior cladding will accumulate atmospheric fall-out which may include soot and residual acids in industrial environments, automobile combustion contamination, gum-spotting, lichen and organic matter from neighbouring vegetation, bird fouling, etc.

The VITRAPANEL® surface is finished to a smooth chemical-resistant glaze and most of the above contaminants will be washed off it when exposed to rain.

In the event of unacceptable disfigurement from any source the original surface of VITRAPANEL® will be restored by annual water blasting or washing with cloth and soapy water followed by hosing down.

The above treatment should be carried out in such a way as to leave the surface uniform in appearance.

No other cyclic maintenance is needed or recommended.

##### **Mechanical Damage Repair:**

Scratch damage can usually be repaired simply by application of the topcoat colour (available from the manufacturer) using a fine camel hair brush.

Major damage needs expert attention and the suppliers should be consulted with a description of the extent of the damage in view of the most appropriate option being selected. The options are:

- a. repair on-site
- b. panel replacement



## *Maintenance Interior*

### **MAINTENANCE PROCEDURE**

#### **INTRODUCTION**

VITRAPANEL® Interior designates modular interior wall or ceiling panelling factory-finished in highly durable and spectacular VITRATHANE® coating system. Substrates include MDF and plywood.

#### **CARE**

##### **General Regular Cleaning:**

This is best carried out with a sponge or soft cloth and any household cleaning detergents or solvents. Abrasive cleaning agents must not be used.

##### **Polishing:**

The product is suitable for polishing with a soft cloth if required.

##### **Graffiti Removal:**

Pressure pack (i.e. paint) damage is usually easily removed by wiping with a mineral turpentine saturated rag within 48 hours of application.

Felt tipped marker damage should be removed using methylated spirits - again within 48 hours.

##### **Mechanical Damage:**

Should the panels be physically scored, chipped or scraped in any way please consult the manufacturer for the best method of repair/replacement.

Scratch damage can usually be repaired simply by application of the top coat colour (available from the manufacturer) using a fine camel hair brush.

##### **DISCLAIMER:**

Since the use and application of this product is beyond our control we cannot be held responsible for product field performance. The information represented above is the result of our considerable experience with this product but is not to be construed as a performance warranty.

# *Vitrapanel<sup>®</sup> Surface Fixed Façade*

## SPECIFICATION TEMPLATE

### 1. GENERAL

#### 1.1 CROSS REFERENCES

##### General

Refer to the General Requirements worksection.

##### Related worksections

Refer to the following worksections:

Light Timber Framing

Light Steel Framing

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### 2. QUALITY

#### 2.1 INSPECTION

##### Panel approval

Submit sample panel in each selected colour to the Superintendent for approval and signature prior to commencement of production. Return the signed sample panel to the manufacturer to implement the warranty.

##### Witness points

Give sufficient notice so that inspection may be made of framing complete with sarking and flashings ready to receive cladding.

##### Hold points

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### 3. MATERIALS AND COMPONENTS

#### 3.1 MATERIALS AND COMPONENTS

##### Fibre cement

Standard: To AS/NZS 2908.2

Eaves and soffit linings: Type A Category 3/Category 4 (prefinished)

Compressed cladding: Type A Category 4

□ Edges: Square arrissed or as specified

##### Flashings / Cappings

Standard: To AS/NZS 2904

Material: Aluminium/zinc coated steel - colour matched to cladding with VITRAFLON 700 fluropolymer coating system, by VITRAGROUP tel. +61 2 47354122.

##### Cladding

Proprietary item: VITRAPANEL<sup>®</sup> compressed fibre cement sheet as manufactured by VITRAGROUP Architectural Facade Systems, tel. +61 2 4735 4122  
Sheet thickness 9mm unless curved below 10m radius.

### 4. CLADDING TYPES

#### 4.1 COMPRESSED FIBRE CEMENT CLADDING

##### Flat panels

Generally: Panels to have smooth even edges free of imperfections such as chips, cut to suit the layout, allowing for a joint gap of 10mm width between panels.

Preparation: Panels to be machine sanded free of scale and slurry. Back seal panels with VC-10 or equal and approved high build UV cured sealer applied to a film thickness of 15-25 um, for warranty purposes.

First coat: Undercoat face of panels with VC-10 or equal and approved high build UV cured undercoat applied to a film thickness of 80-100 um.

Top coat: Machine sand face and edges of panels. Automatic machine apply VITRAFLON 700<sup>®</sup> (Fluoropolymer coating) or equal and approved topcoat in the selected colour.

##### Installation

Framing shall be approved installation system. Install framing in strict accordance with the manufacturers instructions.

Fasteners shall be 10-16 x 30mm wafer head Class 3 zinc plated chromate passivated screws to AS 3566. Pre-finish screws to match colour and gloss of panels.

Panels to be screw fixed to framing through pre-drilled holes. Holes to be drilled 1mm oversize.

## *Vitrapanel® Surface Fixed Façade*

### **5 COMPLETION**

#### **5.1 COMPLETION**

##### **Warranties**

General: Name the Principal as warrantee. Register with manufacturers as necessary. Retain copies delivered with components and equipment.

Commencement: Commence warranty periods at practical completion or at acceptance of installation, if acceptance is not concurrent with practical completion.

Approval of installer: If installation is not by manufacturer, and product warranty is conditional on the manufacturer's approval of the installer, submit the manufacturer's written approval of the installing firm.

Warranty term:	Materials:	15 years
	Installation:	5 years

##### **Maintenance manual**

Contents: Submit a maintenance manual containing technical specification of the cladding system setting out the manufacturer's recommendations on maintenance, to the Principal at Practical Completion. Include the names and addresses of the suppliers, manufacturers and installers of each component

##### **Cleaning**

Final Cleaning: When installation is complete, remove extraneous matter and marks.

Protection: Protect as necessary and leave the finished work undamaged on completion.

# Vitrapanel® Concealed Tape Fixing

## SPECIFICATION TEMPLATE

### 1. GENERAL

#### 1.1 CROSS REFERENCES

##### General

Refer to the General Requirements worksection.

##### Related worksections

Refer to the following worksections:

Light Timber Framing

Light Steel Framing

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### 2. QUALITY

#### 2.1 INSPECTION

##### Panel approval

Submit sample panel in each selected colour to the Superintendent for approval and signature prior to commencement of production. Return the signed sample panel to the manufacturer to implement the warranty.

##### Witness points

Give sufficient notice so that inspection may be made of framing complete with sarking and flashings ready to receive cladding.

##### Hold points

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### 3. MATERIALS AND COMPONENTS

#### 3.1 MATERIALS AND COMPONENTS

##### Fibre cement

Standard: To AS/NZS 2908.2

Eaves and soffit linings: Type A Category 3/Category 4 (prefinished)

Compressed cladding: Type A Category 4

□ Edges: Square arrissed or as specified

##### Flashings

Standard: To AS/NZS 2904

Material: Aluminium/zinc coated steel - colour matched to cladding in VITRAFLON 700.

##### Cladding

Proprietary item: VITRAPANEL®compressed fibre cement sheet as manufactured by VITRAGROUP Architectural Facade Systems, tel. 61 2 4735 4122  
Sheet thickness 9mm unless curved below 10m radius.

### 4. EXECUTION

#### 4.1 CONSTRUCTION GENERALLY

##### Substrates or framing

Framing to be 75 x 38mm continuous tophat steel sections in strict accordance with the manufacturer's instructions.

Before fixing cladding, check and, if necessary adjust the alignment of substrates and framing.

##### Fixing

Concealed.

##### Accessories and trim

Provide all accessories and trims necessary to complete the installation.

### 5. CLADDING TYPES

#### 5.1 COMPRESSED FIBRE CEMENT CLADDING

##### Flat panels

Generally: Panels to have smooth even edges free of imperfections such as chips, cut to suit the layout, allowing for a joint gap of 10mm width between panels.

Preparation: Panels to be machine sanded free of scale and slurry. Back seal panels with VC-10 or equal and approved high build UV cured sealer applied to a film thickness of 15-25 um, for warranty purposes.

First coat: Undercoat face of panels with VC-10 or equal and approved high build UV cured undercoat applied to a film thickness of 100 um.

Top coat: Machine sand face and edges of panels. Spray apply VITRAFLON 700 (refer to postscript - Platinum) or equal and approved topcoat in the selected colour.

##### Installation

Fix vertical tophat sections to align with vertical joints of panels. Space intermediate vertical tophat sections at 600mm (maximum) centres. Pack where necessary to align tophat sections. Neatly fix tophat sections vertically to existing substrate.

## *Vitrapanel® Concealed Tape Fixing*

Adhesive fix 110 x 0.6mm thick continuous flat steel strip horizontally across vertical tophat sections, in position of horizontal joints of panels. Steel strip to be finished in black Colourbond.

Thoroughly solvent clean all tophat sections to remove any traces of grease. Apply 15 x 2.3mm wide strip of 3M VHB or equal and approved tape to face of all vertical tophat sections. Tape is not to cross horizontal steel strip.

Apply a continuous bead of Dow Corning 795 or equal and approved adhesive/sealant along one edge of tape. Paint centre of tophat sections.

Remove protective film from tape and pressure apply panels to tophat sections.

Support corners with 1.2mm thick black painted galvanised steel angles fixed in accordance with the manufacturer's instructions.

The whole to be installed in strict accordance with the manufacturer's instructions.

### **6 COMPLETION** **6.1 COMPLETION**

#### **Warranties**

General: Name the Principal as warrantee. Register with manufacturers as necessary. Retain copies delivered with components and equipment.

Commencement: Commence warranty periods at practical completion or at acceptance of installation, if acceptance is not concurrent with practical completion.

Approval of installer: If installation is not by manufacturer, and product warranty is conditional on the manufacturer's approval of the installer, submit the manufacturer's written approval of the installing firm.

Warranty term:	Materials:	15 years
	Installation:	5 years

#### **Maintenance manual**

Contents: Submit a maintenance manual containing technical specification of the cladding system setting out the manufacturer's recommendations on maintenance, to the Principal at Practical Completion. Include the names and addresses of the suppliers, manufacturers and installers of each component

#### **Cleaning**

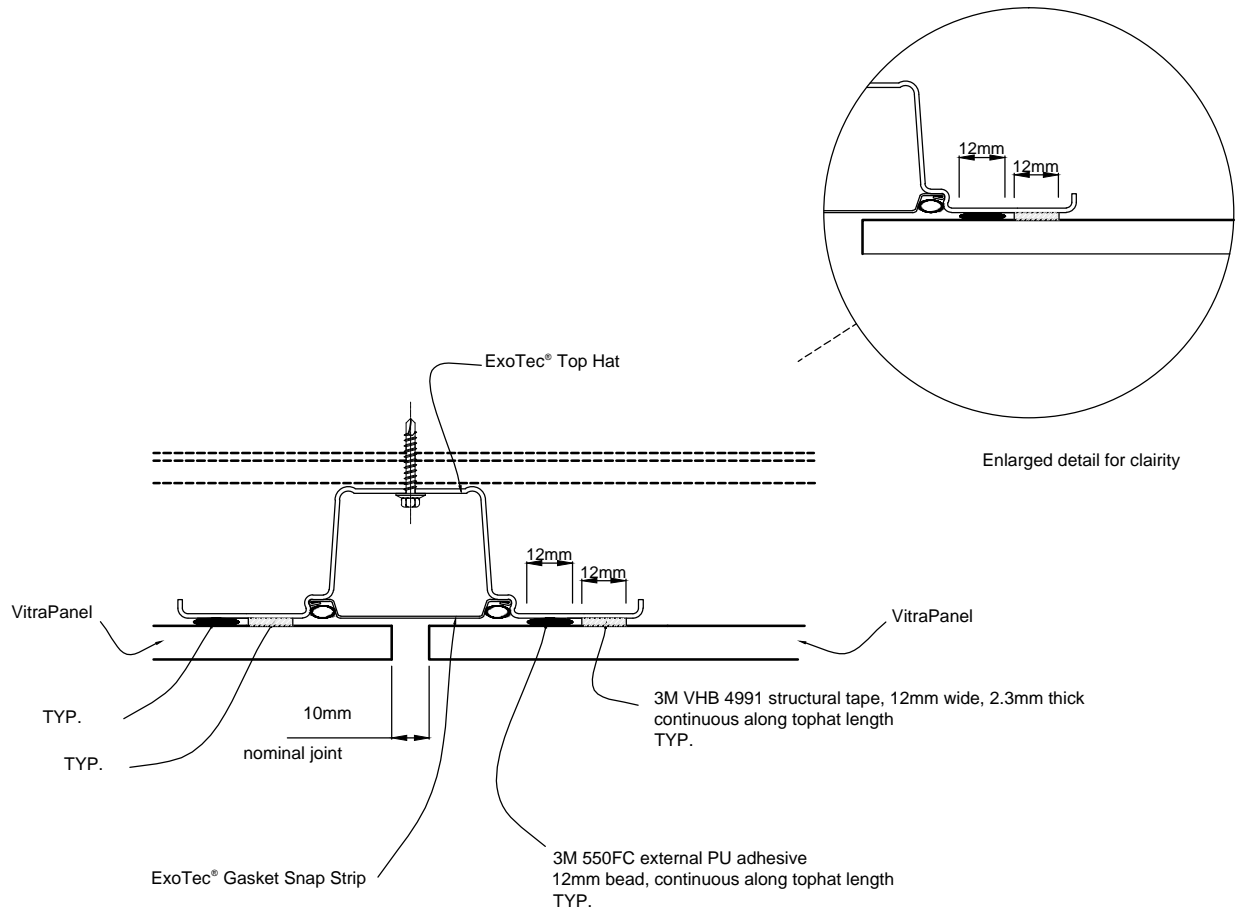
Final Cleaning: When installation is complete, remove extraneous matter and marks.

Protection: Protect as necessary and leave the finished work undamaged on completion.

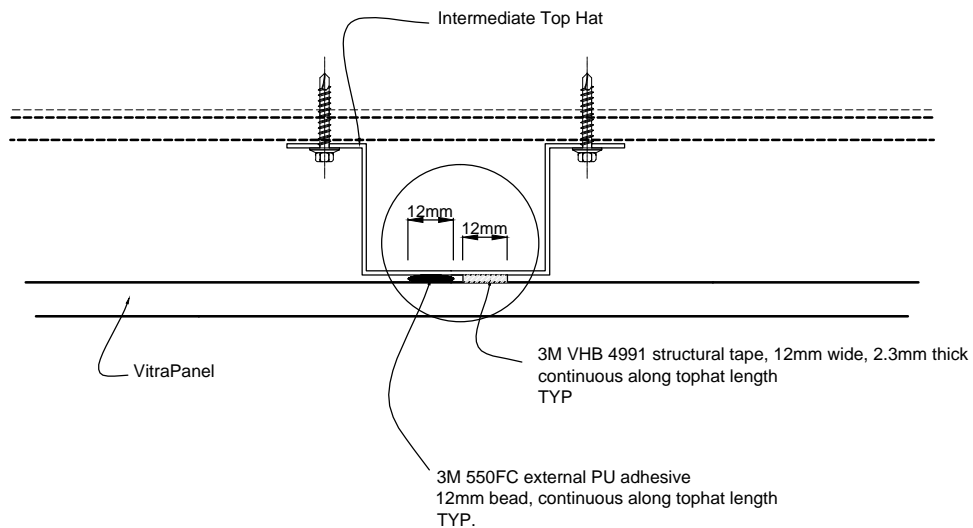
#### **THE PLATINUM SELECTION (VITRAFLON®)**

Superior VITRAFLON® resin technology provides an ultra-long life surface finish for projects needing a 20 year-plus life span. When specifying the PLATINUM Selection please alter the following wording in the standard specifications:

VITRAPANEL® becomes VITRAPANEL PLATINUM®  
VITRATHANE® becomes VITRAFLON 700®



DETAIL 1 Typical Tophat Detail at Panel joint



DETAIL 2 Intermediate Tophat Detail

Note:  
Installation and surface preparation must be in accordance with manufacturers recommendations

## VITRAPANEL PERFORMANCE WARRANTY

1. **VITRAGROUP** of 13 Bromley Road, Emu Plains N.S.W warrants with respect to its product **VITRAPANEL Platinum Selection** ('the product') applied to compressed fibrous cement panels by **VITRAGROUP** to form **VITRAPANEL** (a modular building and curtain wall cladding) that for a period of fifteen (15) years from the date of supply of **VITRAPANEL** the product will not under normal atmospheric conditions: -
  - a. Peel, crack, flake, blister or otherwise delaminate from the CFC substrate;
  - b. Fade or change in colour so as to give delta E CIE laboratory reading greater than 8 units from its original colour. Colour measurements shall be made on clean surfaces free of all oil, grease, dirt, chalk, oxidised film or other contaminants and using the procedure described in ASTM D-2244-85.
  - c. Chalk in excess of 7 units as measured in accordance with the ASTM D-4214-89 procedure.
  
2. This Warranty is subject to the following conditions: -
  - a. It is to be understood that fade of colour changes may not be uniform if surfaces are not equally exposed to sun and elements;
  - b. Warranty claims must be made in writing to **VITRAGROUP** at its address within 30 days after a defect in the product becomes apparent;
  - c. **VITRAGROUP** must be given reasonable opportunity after a warranty claim is made to inspect the product;
  - d. The Warranty will not apply if the defect in the product is caused by abnormal external influences including but not limited to mechanical abrasion, falling objects, damage during transportation and storage, explosion, fire, harmful gases or fumes, water, chemicals, foreign substances or other occurrences beyond **VITRAGROUP'S** control; and
  - e. The warranty will not apply if a defect is caused by failure to install the product in accordance with the James Hardie "Exotec® façade panel and fixing system installation manual" available from James Hardie and at <http://www.jameshardie.com.au/products/exotec.html> or an alternative methodology approved by **VITRAGROUP** prior to installation
  
3. **VITRAGROUP'S** liability under the terms of this Warranty shall be expressly limited at the option of **VITRAGROUP** to the supply of replacement **VITRAPANEL** or to over-spraying the cladding with the product to restore the original appearance. The Warranty with respect to over-sprayed cladding shall extend for the remainder of the Warranty period first given herein.
  
4. To the full extent permissible by Federal or State Law all express or implied warranties and conditions relating in any way to the product other than those contained herein are expressly excluded. Except as expressly provided under this Warranty **VITRAGROUP** shall not be liable for any loss or damage of any nature whatsoever whether such liability arises in contract or in negligence or howsoever arising.
  
5. The warranty will not apply if the defect is due to failure to follow cleaning or maintenance procedures recommended by **VITRAGROUP** at the time of purchase or installation of the product.