# EuroClad

## Installation & Care Instructions

MANUFACTURED IN GERMANY

15 YEAR LIMITED WARRANTY

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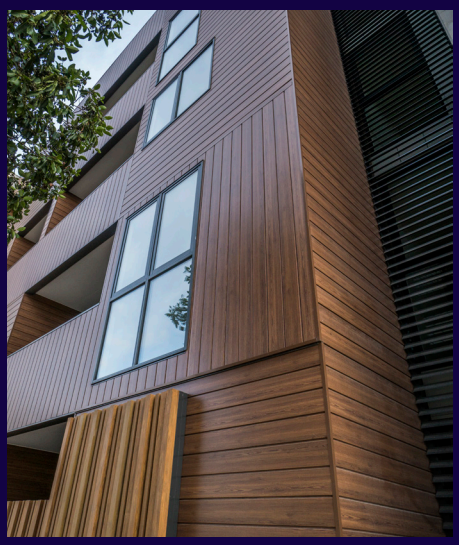

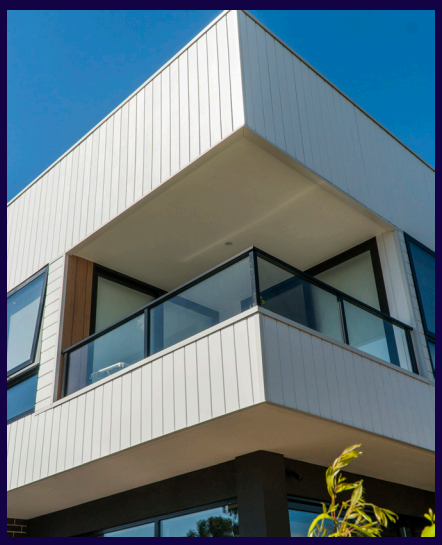

SUPPLIED BY:

PSP MATERIALS PRODUCTS SOLUTIONS

# EuroClad Selekta

## Installation & Care Instructions

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### Scope

This manual is specific to EuroClad - Selekta. EuroClad - Selekta can be used for buildings that fall within the scope of NZS 3604 Timber Framed Buildings and Acceptable Solutions E2/AS1. Although EuroClad - Selekta can be used on buildings that have a maximum weather tightness Risk Matrix of 20, you will need to use Acceptable Solutions E2/AS1 Table 3.0 to ascertain which is the correct product and application for your project. When using introduced components such as flashings, sealants etc please follow the manufacturer's instructions.

Recommendations by PSP Limited are based on good building practice and are not a complete statement of all relevant data. As the installation of the products rely on factors outside the control of PSP Limited, PSP Limited assumes no responsibility for work/systems used in connection with the installation of our products and their suitability to satisfy relevant Building Codes and Regulations, Standards and Council Requirements.

### Product Description – Ecology – Manufacturer Technical Data

- EuroClad - Selekta (- Selekta façade profiles) are identical in terms of their core material and surface texture. However, they are available with different surface coatings.
- The wood core consists of processed timber. We use exclusively untreated pulpwood in the form of wood shavings, thinning material and round timber from sustainable, domestic forestry. Imported timber is not used - especially from tropical climates.
- The binding agent used is a thermosetting artificial resin with building authority approval for outdoor use.
- As a wood preservative, we use an eco-friendly boron-based product with building authority approval that does not contain lindane or PCP.
- This low flammability version is a mixture of boric acid and borax is used as a fire protection agent. No isocyanates, phosphates or halogens are added.
- Several layers of paper are impregnated with artificial resins for use as a coating. The surface and core are fused together without seams in a single process under the application of pressure and heat.

### Colorpan

Base coating of paper impregnated with melamine resin, followed by coloured Colorpan surface coating using a pure, water-based acrylate. The pigments added are free of toxic heavy metals (no lead, chrome or cadmium).

### Dekopan Plus

Multi-layer coating printed or dyed; transparent, weather-resistant surface coating of the decor side. Rear side brown, no colour options. Dekopan Plus - When stored in damp conditions (e.g. kept outdoors, wrapped in film packaging), during or after installation  the paint layer might undergo partial changes, giving it a milky appearance. These disappear completely once the profiles have dried. The resistance of the paint system is not affected. The environmentally-friendly acrylic coating is finally cured by the effects of weathering.

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| Technical Data | Values | Unit | Test Specification |
|---|---|---|---|
| **Fire Behaviour:**<br>• Fire propagation testing and classification of external walls of buildings<br>• Methods for fire tests on building materials, components and structures<br>• Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter<br>• Fire test for construction of buildings in bushfire-prone areas | 0 Flame Spread (6)<br>Fire Indices (7)<br>Group Number 3<br>BAL29 rating | N/A | AS 5113<br>AS NZS 1530.3<br>AS NZS 3837 –1998<br>AS 3959 |
| Fixing spacings for Cyclone rated areas | Fixing Spacing | N/A | AS NZS 1170.0:2002<br>AS NZS 1170.1:2002<br>AS 1720.1:2010<br>AS 1684:2010 |
| • **Water Penetration:**<br>• Preliminary air pressure tests: ±1.5 kPa<br>• AS/NZS 4284 Static water test at 455 Pa<br>• AS/NZS 4284 Cyclic water test, from 267-533, 355-711, 533-1066 Pa<br>• E2/VM1 Series 1 water test at 455 Pa<br>• E2/VM1 Series 2 water management test at 455 Pa<br>• E2/VM1 Series 3 Wetwall test at 50 Pa<br>• ULS test at ±2.5 kPa | NZ and AS result (8) | N/A | E2/VM1<br>AS/NZS 4284:2008 |
| CodeMark for Australia<br>PASS™ S14 New Zealand Building Act 2004 | AS<br>NZ | N/A | Certificate: CM40177<br>10902 |
| **Acoustic ratings**<br>AS1191.2002<br>Acoustics - Method for Laboratory measurement of airborne sound transmission<br>Insulation of building elements<br>AS/NZS ISO 717.1:2004<br>Acoustics – Rating of sound insulation in buildings and of building elements Part 1:Airborne sound insulations | Rw 49 and Rw 47 (9) | N/A | AS1191.2002<br>AS/NZS<br>ISO717.1:2004 |
| Sustainability | PEFC certified | N/A | PEFC |
| Density | 800 – 950 | kg/m³ | EN 323 |

1. 4 mm particle board screw, using a hole of 3 mm diameter, 10 mm deep.
2. Not available for all products, please ask for specific information.
3. Maximum expected length change under extreme climate fluctuations.
4. Gt 0A is the best, Gt 4A is the worst value.
5. With measurement geometry 0°/45°, standard illuminant “C”.
6. See Ignis AS 5113 advice 5347 I01 R 01 14 October 2017
7. See AWTA test report 7-586357-CQ AS 1530.3:1999 02 August 2012
8. See Façadelab test report no.17-17
9. See ASK reports for construction method – 6813R01V02_Euro.docx and 6813R02V02_Euro.docx

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PSP MATERIALS PRODUCTS SOLUTIONS

| Technical Data | Values | Unit | Test Specification |
|---|---|---|---|
| Flexural strength | 40–45 | $N/mm^2$ | EN 310 |
| Elasticity modulus | 4000 – 6000 | $N/mm^2$ | EN 310 |
| Tensile strength vertical to the surface | 2.0 – 3.0 | $N/mm^2$ | EN 319 |
| Screw withdrawal strength[1] | 800 – 1300 | N | WERZALIT TEST STANDARD |
| Swelling after storage (after 2 hrs) | 0.3 – 0.6 | % | EN 317 |
| In water at 20°C (after 24 hrs) | 3.0 – 5.0 | % | EN 317 |
| Moisture content | 5–10 | % | EN 322 |
| Temperature resistance under permanent load | -50 to +70 | °C | WERZALIT TEST STANDARD |
| Temperature resistance under temporary load | +120 | °C | WERZALIT TEST STANDARD |
| Length change due to moisture/heat exposure[3] | 1 – 3 | mm/m | WERZALIT TEST STANDARD |
| Thermal conductivity λ | 0.20 | W/m·K | DIN 52 612 |
| Water vapour permeability diffusion-equivalent air layer thickness | 5–15 | m | DIN 52 612 |
| Cross-cut test[4] | GT0A–GT1A | N/A | EN ISO 2409 |
| Scratch resistance | 0.5 – 1.5 | N | EN 438 |
| Light fastness | Level 8 | N/A | DIN 54 004 |
| Chemical resistance | Limited resistance | N/A | EN 438 |
| Cigarette burn resistance | Not resistant to burns | N/A | as for EN 438 |
| Colour deviation[5] | E < 1 | N/A | DIN 5033 |
| Impact load | Impact resistant | N/A | WERZALIT TEST STANDARD |

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3. Maximum expected length change under extreme climate fluctuations.
4. Gt 0A is the best, Gt 4A is the worst value.
5. With measurement geometry 0°/45°, standard illuminant “C”.
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### Fire installation guidelines for commercial applications

To verify the installation of the EuroClad - Selekta panel a number of reviews relating to the location, fixing, nature of the wall and proximity to exposures being either an external fire or a fire source feature the following considerations need to be applied:

### Guide for performance-based acceptance*:

| No. | Requirement | Measure | Measure of Acceptance |
|---|---|---|---|
| 1 | Insulation | Non-Combustible | The insulation must be non-combustible. |
| 2 | Sarking type material | Flammability ≤5 | The sarking type material is to be non-combustible or have a flammability index not exceeding 5. |
| 3 | Fixing | Mechanical | The fixing must be mechanical onto top hats at spacings no more than 600mm centres. |
| 4 | Return wall | Single plane | The EuroClad - Selekta panel is to be installed on a single plane only and not on a re-entrant return wall at 90° or less to the primary - Selekta clad wall. |
| 5 | Non-Sprinklered Building | Spandrel protection to the wall frame. | A non-sprinklered class 2-9 building must have spandrels protecting the wall frame (i.e. from both sides of the frame} In accordance with clause C2.6 of the BCA. |
| 6 | External fire spread from fire source feature. | External fire source feature to be greater than 1.8-m from the EuroClad - Selekta panel installation. | The panel is to be installed greater than 1.8m from an external fire source feature. |
| 7 | Wall FRL requirement | The wall FRL to be independent of the EuroClad - Selekta Panel and to protect the wall frame from both directions. | The FRL of the wall is to be achieved independent of the and EuroClad - Selekta panel. |
| 8 | Exposure to direct flame testing of the EuroClad - Selekta impact. This includes unprotected openings, external balconies/platforms or the ground level. | Testing of the EuroClad - Selekta Panel to AS 5113:2016 | The testing of the EuroClad - Selekta Panel to AS 5113:2016, being a large scale external wall test, has demonstrated fire spread does not occur along a single plane. |
| 9 | Above or near an exit | Spread of fire and limited debris | The testing of the EuroClad - Selekta panel insulation to AS 5113:2016, being a large scale external wall test, has demonstrated that vertical and horizontal fire spread, outside of the fire itself, on a single plane does not spread. The debris from panel included small elements less than 2kg in weight which did not individually flame for more than 20 seconds at a time.<br>Outside of the fire event itself, EuroClad - Selekta debris is unlikely to cause an exit to be blocked. |

**Refer to AS 5113; AS NZS 1530.3; AS NZS 3837 – 1998; AS 3959 and certification advice prior to submission to your local authority.*

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PSP MATERIALS PRODUCTS SOLUTIONS

### EuroClad - Selekta profile dimensions

5400mm (length) x 170mm (width) x 18mm (depth)

### Calculating the required quantity (Calculation values exclude cutting waste):

| | | | Required Quantity/m² | Required Quantity/m² |
|---|---|---|---|---|
| | Coverage Width | Standard Lengths | Façade Profile | Façade Screw 6G x 50 Stainless Steel |
| Selekta | 155mm | 5400mm | 6.45 linear m | 15 pcs. |

Please note: If the pre-drilled fixing slots at the top of the EuroClad - Selekta do not line up with the frame/nogs its recommended to drill new slots. Make sure that the head of the screw sits flush in the groove to allow the next weatherboard to be installed. If the next weatherboard is not sitting square the reason could be that the fixing screws on the previous weatherboard is not flush in the groove.

### Sub-framework for facade cladding

Increased wind suction at the edge areas of the building walls must be considered when planning the sub-framework. The fastening spacing of the EuroClad - Selekta profiles must be reduced to max. 300mm in these areas; additional support battens must be provided as necessary.

**Note:** The wood decors are equivalent to natural wood surfaces, meaning that different grain textures are possible within a single shipment (plain and/or mottled). Unfortunately, sorting at the factory is not possible! In order to obtain a uniform overall finish, we recommend considering this fact and, for example, laying out the façade profiles before starting with the installation.

### Wind loadings

This is a simplified form of general rule of thumb for wind loadings. The product has been tested and results reported by Summermore Pty Limited. to the requirements of:

- AS/NZ 1170.0
- AS/NZ 1170.1
- AS 1720.0
- AS 1684

| Wind Loading | Speed | Equivalent from Test Data |
|---|---|---|
| Low | <32m/s | N1, N2 |
| Medium | 37m/s | C1, N3 |
| High | 44m/s | C2, N4 |
| Very High | 50m/s | C2, N4 |
| Extra High | 55m/s | C2, N4 |
| Specific Design | >55m/s | Engineered Design |

As wind zones in NZS 3604 are a simplified method of calculating wind action based on AS/NZS 1170.2, it is recommended that fixing testing data is made readily available to suitably qualified Engineers for specific design. Testing data shows suitable fixing details for wind speeds up to 60m/s (C3) which is outside the scope of NZS 3604.

## Storage and Handling

- Keep all EuroClad - Selekta dry and protected from the elements at all times before installation. Inside storage, under cover is best. Schedule the delivery of EuroClad - Selekta to site as close to the time of installation as possible.
- Unload EuroClad - Selekta either by hand or a lifting device – do not 'tip' them off a truck deck
- Carry individual boards on their edge.
- Do not drag boards in a way that will damage the surface.
- Lay flat with bearers underneath at a maximum of 1 metre spacing.
- Ensure EuroClad - Selekta are stored a minimum of 150mm off the ground.
- If the surface underneath is damp, place a moisture resistant sheet (i.e. polythene) under the EuroClad - Selekta.

## Before Installation

- Ensure that the framing complies with all requirements of NZS 3604, including the straightness of the framing and the moisture content being less than 20%.
- Ensure the underlays meet all the requirements of E2/AS1 Table 23 and Section 9.1.7
- Additional studs are included at internal corners where there is a cavity.
- For in-situ inspection of the surface finish of powder coated extrusions for EuroClad applications, the below Window & Glass Association New Zealand link will provide an introduction and guidance on the assessment of significant surfaces with respect to surface defects in the coating system. https://www.wganz.nz/wp-content/uploads/2018/11/Window-Glass-Association-Appearance-in-situ-November-2011.pdf

## Steel Wall Framing

Steel framing is a proprietary system and installation must be in accordance with the system suppliers' instructions - The supplier should be made known that EuroClad - Selekta is the proposed cladding option before design work commences.

EuroClad - Selekta installation over steel framing must incorporate a thermal break with a R-value of at least R0.25 fixed to the outer face of the steel Framing as;

- Strips fixed to the outer flange of each steel member (studs, dwangs/nogs, plates, lintels)
- A continuous sheet across the face of the wall (the thermal break may also incorporate the flexible wall underlay)
- Fixings to be recommended by steel framing supplier.

If using 8g Glavanised Screws, please pre drill the top of the EuroClad boards to accommodate the larger screw diameter. Please check with the fixing manufactures guild lines if the steel framing needs to pre drilled before fixing.

## Wall Underlays

- A wall underlay is any material placed on the framing and behind the cladding to act as a second line of weathering defence. Wall underlays include flexible materials, such as Kraft based papers or synthetic wraps, and rigid sheathings such as plywood or fibre cement board.
- Wall underlays suitable for the use in conjunction with EuroClad - Selekta are those meeting the requirements of Table 23 of E2/AS1.

## Flashings

- Ensure that these comply with the durability requirements as shown in NZS 3604 section 4 and E2/AS1 Table 20
- Window and door manufacturers are responsible for the supply of head flashings
- Stop-ends to finish at the back of cladding.

## Sealers and Air Seals

- Sealants are only part of the system to keep buildings weathertight and should not be relied on as being the primary method of protection. Ensure that the manufacturers specifications/installation methods are followed.
- All sealants need to be suitable for exterior use
- Air Seals are required where a hole, penetration or void (ie windows, metre boxes, doors) occur
- Air Seals have two components being Backing Rod of a diameter to suit the gap and the Sealant (acrylic latex, silicon sealant or self-expanding polyurethane foam)
- Any excess sealant needs to be trimmed

Backing rod: closed cell PEF rod of a diameter to suit the gap. Air seal: acrylic latex or modified silicon sealant complying with ISO 11600 used in accordance with the manufacturer's instructions or low expansion self-expanding polyurethane foam in accordance with the requirements of E2/AS1.

## Drained and Vented Cavities

A drained and vented cavity is required behind EuroClad - Selekta unless the building is unlined or Importance Level 1, in which case, the EuroClad Selekta may be direct fixed as per E2/AS1. The cavity is formed by fixing Castellated Battens (EuroClad - Selekta vertical installation) or CaviBat Battens (EuroClad - Selekta horizontal installation) over the studs for horizontal installation or studs and nogs for vertical installation. Cavity battens are to be fixed in accordance with BRANZ Bulletin 475. Vermin proofing, which allows draining and ventilation, must be fitted to the bottom of the cavity.

Note: The cavity must be open to the exterior at the bottom of every second storey and across the tops of windows, doors and other penetrations such as meter boxes. Fit Quickflash cavity closures to prevent vermin entry. Fit continuous Quickflash cavity closure to the bottom of all cavities, including across the tops of openings to prevent vermin entry. Fix with 30 x 2.50mm galvanized flat head nails/clouts at 400mm centres. For more information visit www.quickflash.co.nz.

uPVC Cavity Closers can be installed as an Alternative Solution. Ensure that the manufacturers specifications/installation methods are followed.

## Cavity Battens

Vertical Installation - Castellated timber cavity battens must be used that are H3.1 or H3.2 treated and have gaps machined into it at approximately 100mm centres. They have a downward slope on the top at a 20° angle to assist draining water. They are to be fixed onto every nog/dwang using 40x2.5 galvanised flat head nails or 50mm galvanised brad nails. Ensure that the manufacturers specifications/installation methods are followed.
Please note: Vertical installation requires fixing the nogs at 480mm centres maximum.

Horizontal Installation: Cavibats must be used. Cavibats is an extruded polypropylene fluted cavity batten. Cavibats are installed with 40x2.8mm galvanised flat heat nails or brad gun nailed with galvanised brads at 400mm centres. Please refer to Cavibat's technical guide for full installation details. Under NZS3604:2011 section 8 the maximum stud spacing is 600 mm although lesser spacing may be required for taller walls and/or smaller studs.

On exposed sites, reducing the framing spacing to 400 mm centres reduces the potential for deflection of horizontal weatherboards under peak wind conditions – reference BRANZ Good Practice Guide – Timber Cladding – Wall Construction.

For Batten installation on to framing please refer to: EuroClad Selekta batten layout in this installation guide.

## Fixing

Note: It is important to use only one fixing per board per stud to allow for movement.

- Fix each board with one 6g x 50 mm Stainless Screw per board at every stud or nog.
- Start fixing weatherboards near the middle of the board and work outwards to the ends.

## Cuts/Joins

- EuroClad - Selekta with expand and contract longitudinal 1mm minimum per metre. Allowances must be made at each end/join for movement Where joins are necessary, they must be done over studs or battens
- For Joiner options either use the EuroClad Edge A & B (F Section) or Connector A & B (H Joiner)
- Avoid placing the join over water drip lines, for example under the side edge of a window
- Prime the cut ends with EuroClad - Selekta Sealer (colour matched) and allow to dry

## External and Internal Joiners

EuroClad - Selekta Corner A & B can be used for both External and Internal Corner applications (see drawing). All cut ends must be sealed with EuroClad Selekta Sealer (colour matched) and allowed to dry.

## Maintenance

All products are affected by their surrounding environment. By maintaining your property to the level appropriate to its surrounding environment you will ensure its long-term performance and beauty.

- Maintenance is generally recommended to be carried out every 12 months, but in more corrosive environments (ie, coastal areas or industrial or geothermal atmospheres) every 6 months is recommended. Pay special attention to areas that do not get regular rain washing such as under soffits
- Wash down using warm soapy water to remove salt deposits, dirt build up, mould and insect traces (do not use a water blaster or harsh chemicals)
- Moss, mould and lichen can cause long term damage to the coating so special care needs to be taken in removing it.
- Check sealants and replace them if they are showing signs of loss of edge adhesion or surface cracking
- Check flashings and replace any that have been damaged to the point of allowing water intrusion
- Check for missing attachments and loose fittings
- In areas of high weather tightness risk take particular care and resolve any issues immediately to avoid a larger long-term problem

## Heat Generating Colours

Dark colours absorb heat from the sun. Light colours reflect significantly more heat. Testing has shown that dark colours can generate temperatures in excess of 85°C in direct sunlight whereas light colours under the same conditions can be as much as 35°C cooler.
EuroClad - Selekta has been Light Tested in accordance with DIN 54 004 with a rating of Level 8 (report on request www.euroclad.co) Natural fading will occur over time however the structural integrity is warrantied for 15 years. EuroClad - Selekta will not warp, rot or split.

**For more information please visit www.euroclad.co.**