TECHNICAL MANUAL
SELEKTA Timber Composite Cladding

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1.1 About This Manual:

This manual has been developed to effectively assist fabricators and contractors to work with SELEKTA. Due to the uncontrollable conditions onsite and different methods of job scope, as well as the variable skills and judgment of installers and the quality of equipment, tools, etc, the suggestions and recommendations contained in this manual are provided without warranty. The information and recommendations herein are believed to be correct at time of publishing.

BLUECHIP reserves the right to revise the contents of this manual without prior notice. Any construction or use of the product must be in accordance with all local zoning and/or building codes and in accordance with the current NCC at the time of use. Except as contained in a written warranty certificate, the supplier does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.

1.2 Company Background:

Founded in 2003 by five brothers, BLUECHIP has grown every year since to become one of Australia's leading suppliers of architectural building envelopes. BLUECHIP's product range covers the complete system from the structure out including all types of cladding materials, composite decking, sub-framing, insulation, waterproofing and fixings.

With offices in Sydney, Melbourne and Perth, BLUECHIP has supplied more than 3,000,000m2 of materials to Australian projects since 2003. Our commitment to innovation and ongoing investment in R&D ensures BLUECHIP will continue to lead the market with BCA/NCC compliant facade solutions in the years ahead.

For architects and consultants, BLUECHIP's wide range of different materials and 'complete-system' approach enables the creation of inspiring high-performance facades. For builders and contractors, BLUECHIP's large local stock, well established supply chains and genuine appreciation for our clients means you can trust us to deliver as promised every time.

1.3 Company Details:

Company:	Blue Chip Group Pty Ltd
ABN:	98 162 282 064
Head Office:	16 Ashby Close, Forrestfield WA 6058
Phone:	1300 945 123
Email:	sales@bluechipgroup.net.au

Important Note:
SELEKTA is NOT deemed-to-satisfy non-combustible so is only compliant for type C construction projects. For non-combustible timber cladding use ULTRAWOOD which is DTS non-combustible in accordance with NCC 2019 and compliant for use on all buildings.

1.4 Product Description:

Timber Composite Cladding
Made in Germany, SELEKTA timber composite cladding is a unique, prefinished product with a beautiful timber grain embossed surface. Designed for stability and longevity with style, SELEKTA timber composite cladding is eco-friendly, maintenance free and incredibly easy to install. SELEKTA timber composite cladding has been subjected to extreme endurance tests, including swell tests and UV tests. After being subjected to a wide range of extreme environmental conditions and temperature fluctuations between -30° and +70° Celsius, the product responded brilliantly, outlasting wind and weather for 30 years.

NCC 2019 Compliance*
SELEKTA timber composite cladding is compliant with NCC 2019 for use as external cladding on all type C* construction projects ensuring you are specifying a compliant product tested to Australian standards.

BAL 29 Fire Rating*
SELEKTA timber composite cladding has been tested to AS fire standards and achieves a BAL 29 fire rating along with excellent group rating as per AS 3837 for exterior cladding.

AS 5113 Fire Testing*
SELEKTA timber composite cladding has been tested as per the new AS 5113 full-scale facade fire test which is required for CV3 performance-based solutions on all type A & B construction.

Maintenance Free
SELEKTA timber composite cladding is guaranteed not to rot, split, warp or check. Highly resistant to damage caused by termites and fungal decay and does not need any on-going sealing, oiling or re-painting.

Secret Fixing
SELEKTA timber composite cladding comes with a simple tongue and groove fixing system with machined screw slots for ease and speed of installation saving any need for pre-drilling each length.

Non-Leaching
SELEKTA timber composite cladding is the only timber-look cladding that cannot leach as there are no tannins impregnated into the profile allowing for a beautiful look that will last.

Acoustic Rating
Laboratory acoustic testing results are available. SELEKTA timber composite cladding is the perfect material to use on multi-residential high-density developments to improve acoustics.

Full Warranty
SELEKTA timber composite cladding comes with a comprehensive 10-year warranty backed by the German based manufacturer. Guaranteed quality and peace of mind for your project.

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1.5 More Information on SELEKTA:
https://www.bluechipgroup.net.au/timber-cladding-perth/timber-composite-cladding-perth.html

2.1 Physical Description:

The SELEKTA particle wood core consists of processed timber exclusively from 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. For low flammability 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 similar to high pressure exterior laminate. The surface and core are fused together without seams in a single process under the application of high pressure and heat.

2.2 Finishing Process:

Dekopan Plus (Wood-look) colours have multi-layer coating, printed or dyed and a transparent weather resistant surface coating on the decor side. Colorpan colours (Solid colours) have a base coating of paper impregnated with melamine resin, followed by coloured surface coating using a pure, water-based acrylate. The pigments added are free of toxic heavy metals (no lead, chrome or cadmium). The rear side is brown or milky white from the production process and offers no colour options.

2.4 Technical Data:

ITEM	TEST STANDARD	UNIT	RESULT
Material Density	Actual	Kg/m3	800-950
Flexural Strength	EN 310 / EN 438	N/mm2	40-45
Elasticity Modulus	EN 310 / EN 438	N/mm2	4-6
Transverse Tensile Strength	EN 319	N/mm2	2-3
Moisture Content	EN 322	%	5-10
Swelling After Storage in Water ▪ At 20°C After 2hrs ▪ At 20°C After 24hrs	 DIN 317 DIN 317	 % %	 0.3-0.6 3-5
Thermal Expansion	Actual	mm/m	1-3
Thermal Conductivity	DIN 52 612	W/mk	0.20
Water Vapour Permeability	DIN 52 615	M	5-15
Scratch Resistance	EN 438	N	0.5-1.5
Light Fastness	DIN 54 004	-	Level 8
Chemical Resistance	EN 438	-	Limited
Colour Deviation	DIN 5033	Delta E	<1

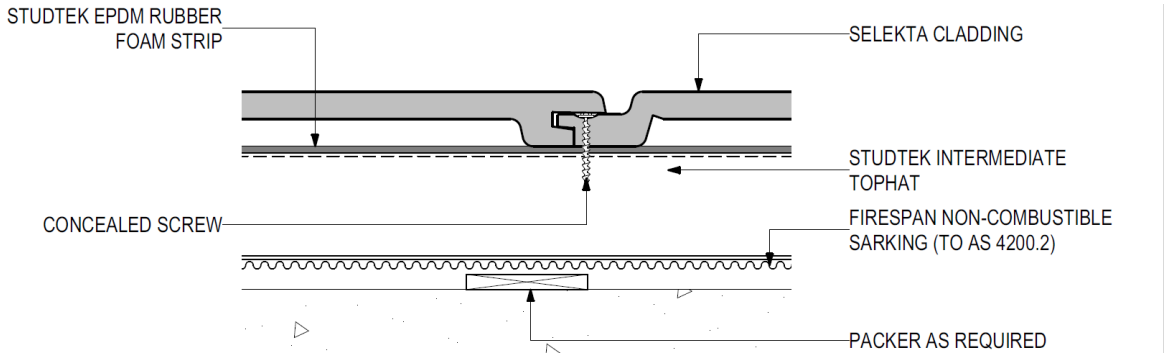
3.1 Fire Performance:

ITEM	TEST STANDARD	UNIT	RESULT
BAL Rating	AS 1530.8	Exova WF*	BAL-29
Group Rating	AS 3837	Exova WF	3
Average Specific Extinction Area	AS 3837	Exova WF	2.6m2/kg
Ignitability	AS 1530.3	AWTA	13
Spread of Flame Index	AS 1530.3	AWTA*	0
Heat Evolved Index	AS 1530.3	AWTA*	4
Smoke Developed Index	AS 1530.3	AWTA*	3

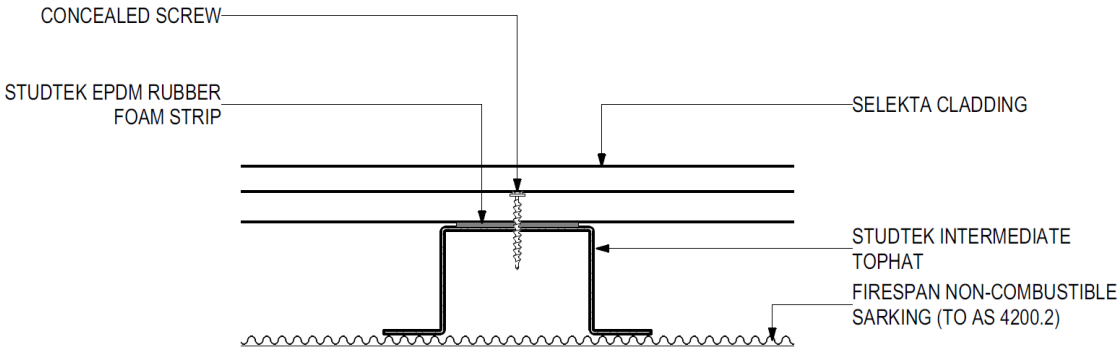
4.1 Installation:

SELEKTA can be installed either vertically or horizontally using secret-fix screws to STUDTEK steel top-hats or timber framing. Use CLADTRIM extrusions for all junctions and other details;

Vertical Installation (Typical Plan Detail):



Horizontal Installation (Typical Plan Detail):



SELEKTA installation details are available in PDF and CAD on request. The SELEKTA installation details are provided for conceptual purposes only. These are not the only methods that can be used to attach SELEKTA, nor can they be used generically without consideration for each individual application. Good design engineering may preclude the choice of details used.

4.2 Acceptable System Components:

Sarking (Delete if using SINIAT WD as below – recommended):
Shall be FIRESPAN deemed-to-satisfy non-combustible sarking tested by a NATA accredited laboratory to AS 1530.1. Install and tape in accordance with AS 4200.2 to all cladding areas.

Rigid Sheathing Board (Best practice in lieu of Sarking):
Shall be SINIAT WD 12.5mm deemed-to-satisfy non-combustible, vapour permeable material which assists in achieving a 60/60/60 FRL when installed as per manufacturer's directions.

Cladding Trims:
Shall be CLADTRIM colour-matched trim system supplied by Blue Chip Group Pty Ltd and installed as required to waterproof the façade in accordance with the manufacturer's details.

Sub-framing System:
The sub-framing system to be attached to the main structure in a manner to ensure all applied loadings to the cladding is transferred back to the main structure. Size and spacing of top hat members shall be determined according to applied loads and deflection limitations. Top-hat spacings shall be maximum 600mm to adequately support the cladding system.

Acceptable Sub-framing manufacturers are:
- STUDTEK Facade Framing, 1300 945 123, sales@bluechipgroup.net.au.

Trim Sealant:
All junctions are to be filled and sealed with PROLASTIK silicone based non-stain sealant to manufacturer's specifications immediately prior to installing the outside CLADTRIM profile.

4.3 General Fixing & Maintenance Instructions:

- SELEKTA is to be secret fixed using screws supplied by BLUECHIP.
- SELEKTA can be installed either horizontally or vertically.
- SELEKTA wood decors are equivalent to natural wood surfaces meaning that different grain textures are possible within a single shipment (plain and/or mottled). In order to obtain a uniform overall finish, we recommend considering this fact and, for example, laying out the cladding profiles before starting with the installation to ensure satisfactory appearance.
- SELEKTA boards should be at ambient temperature prior to any cutting or installation.
- All butt joints, cut edges and ends of boards must be sealed with SELEKTA End Sealer supplied by BLUECHIP.
- When installing SELEKTA vertically, leave a minimum 10mm gap at the base of the cladded wall between the board (end grain) and any surface that meets the board (end grain) in a perpendicular line or plane to the cladding being installed.
- SELEKTA can be sawn and cut to length with normal woodworking tools. Recommended blades are a hard metal saw blade with a high number of teeth, (tooth pitch approx. 10 – 15 mm).
- SELEKTA should be acclimatized as required onsite to ensure moisture and temperature equilibrium with the surrounding environment prior to installation.
- The sub-frame shall be level and aligned and installed perpendicular to cladding direction over water-proof membrane at maximum 600 mm centres. The sub-frame shall be minimum 20mm thick to provide adequate ventilation behind the cladding. The back-ventilation cross-section may not be regularly diminished by battens or other objects. The ventilation inlets and outlets must have consistent widths of at least 20 mm.
- Drivers should be adjusted to a low or medium torque setting when fixing screws in to the cladding and screws should not be overdriven but may only be screwed in until the screw head rests against the surface.

General Fixing & Maintenance Instructions (Continued):

- The CLADTRIM corner profiles shall be installed as required and fixed at maximum 600mm centres by pilot drilling and screwing with countersunk stainless-steel screws. Sealant and flashings should be used as required to ensure water proofing.

- To install the CLADTRIM colour-matched extrusions the base section is to be fixed to the wall or sub-frame first and then after SELEKTA cladding is installed sealant should be applied as required to ensure water proofing before the external CLADTRIM piece is clipped into place until it is flush with the cladding face.

- The SELEKTA cladding shall be fixed at maximum 600 mm centres by inserting screws through the pre-drilled slots in the cladding boards. Always centre the screws in the punched fastening holes of the cladding profile except for a screw nearest to a butt join which should be inserted at the edge of the slot nearest to the butt join.

- The cladding shall be installed with a minimum 10mm spacing between all butt joints, end stops and between any permanent structure and/or penetration to allow for thermal expansion and contraction of the material.

- Butt joints should be limited to 1 per cladding run and joined on a suitable structural support. All butt joins and other junctions are to be sealed with a suitable sealant in accordance with the manufacturer's instructions to ensure water proofing.

- If more than 1 butt join is required per cladding run then the CLADTRIM colour-matched cover strip profile should be used as a joint strip installed perpendicular to the cladding.

- To install the CLADTRIM colour-matched cover strip the base section is to be fixed to the wall or sub-frame first and then after SELEKTA cladding is installed sealant should be applied as required to ensure water proofing before the external CLADTRIM piece is clipped into place until it is flush with the cladding face.

- The cladding shall be cleaned and maintained as required to avoid any accumulation of surface contaminants and to maintain the desired performance and appearance.

- The cladding shall be installed as per the latest version of the SELEKTA Install Details allowing for any site-specific expansion and contraction requirements and using colour-matched CLADTRIM extrusions for all junctions and abutments.

- The cladding shall be installed as per the latest version of the SELEKTA Draft Specification allowing for any site-specific requirements to ensure the desired long-term performance and aesthetics are achieved.

- The cladding system shall be installed in accordance with the latest version of the Australian NCC/BCA as well as any other government regulations or requirements at any given time and for any particular project.

- The supporting wall must be watertight and there must be ventilation / drainage at the base of the wall.

- Use breathable building paper behind external boards to prevent sweating that may cause mould or deterioration.