

# TRESPA®

## HIGH PRESSURE LAMINATE CLADDING PANELS SPECIFICATION V1.0

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Exterior High Pressure Laminate cladding panel system and accessories as required, for a complete drained and rear-ventilated rainscreen system.
1. Cladding.
  2. Fascia.
  3. Horizontal soffits.
  4. Storefront panels.
- B. Interior High Pressure Laminate wall panel system and accessories.

#### 1.2 REFERENCES

- A. Australian Standards (AS)
1. AS1530.3 – Methods of Fire Tests on building materials, components and structures;  
\* Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release.
  2. AS-ISO9705 – Full scale room test for surface products.
  3. AS1170.2 – Structural design actions – wind actions
- B. ASTM International (ASTM):
1. ASTM B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
  2. ASTM D 635 - Standard Test Method for Small Scale Burning.
  3. ASTM D 1929 - Standard Test Method for Ignition Temperature.
  4. ASTM D 2244 - Standard Practice for Calculation of Colour Tolerances and Colour Differences from Instrumentally Measured Colour Coordinates.
  5. ASTM D 2247 - Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
  6. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
  7. ASTM E 119 - Standard Test Method for Fire Rated or Fire Resistive Construction.
  8. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors Under the Influence of Wind Loads.
- C. European Standards (EN):
1. EN 438-2 - Decorative High Pressure Laminate (HPL) Sheets Based on Thermosetting Resins - Determination of Properties.
  2. EN 12524 - Building Materials and Products, Hygrothermal Properties, Tabulated Design Values.
  3. EN13501.1 – Fire Classification of Building Products and Building Elements – classification using test data from reaction to fire tests.
- D. International Organization for Standardization (ISO):
1. ISO 105 A02-93 - Tests for Colour Fastness -- Part A02: Grey scale for assessing change in colour.
  2. ISO 178 - Determination of Flexural Properties.
  3. ISO 527-3 - Determination of Tensile Properties.
  4. ISO 846 - Evaluation of the Action of Organisms.
- D. National Fire Protection Association (NFPA):
1. NFPA 268 - Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source.
  2. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

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### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
  1. Preparation instructions and recommendations.
  2. Storage and handling requirements and recommendations.
  3. Installation methods.
- C. Shop Drawings: Submit plan, section, elevation and perspective drawings necessary to describe and convey the layout, profiles and product components, including edge conditions, panel joints, fixture location, anchorage, accessories, finish colours, patterns and textures.
- D. Code Compliance: Documents showing product compliance with local building code shall be submitted prior to the tender. These documents shall include, but not be limited to, appropriate Evaluation Reports and/or test reports supporting the use of the product. Alternate materials must be approved by the architect prior to the tender date.
- E. Engineering Calculations: Submit engineering calculations as required by the local building code, showing that the installed panels and attachments system meets the wind load requirements for the project.
- F. Selection Samples: For each finish product specified, two complete sets of colour samples representing manufacturer's full range of available colours and patterns. Please note that samples are only representative for colour and pattern and not for thickness or edge finish. Metallic colours may also show a slight fluctuation in appearance due to the metal flake orientation from batch to batch.
- G. Verification Samples: For each finish product specified, two samples a minimum of 89 mm by 89 mm representing actual product, colour and patterns. Sample edges may vary from field panel edges.
- H. Operation and Maintenance Data: Submit operation, maintenance, and cleaning information for products covered under this section.

### 1.4 QUALITY ASSURANCE

- B. Installer Qualifications: All products listed in this section are to be installed by a single installer recommended by the manufacture or representative.
- C. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- D. Do not proceed until workmanship, colour, and sheen are approved by Architect/Builder.
- E. Pre-installation Meetings: Conduct pre-installation conference to verify project requirements, substrate conditions, manufacturers installation instructions and manufacturer's warranty requirements.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery:
  1. During transportation, use stable, flat pallets that are at least the same dimension as the sheets.
  2. Materials shall be packaged to minimize or eliminate the possibility of damage during shipping. Items such as wooden side boards, wooden lid, and spacers or protective sheeting between panels shall be used to protect the panels from surface and/or edge damage.
- B. Storage:
  1. Store products in an enclosed area protected from direct sunlight, moisture and heat. Maintain a consistent temperature and humidity.
  2. Store products in manufacturer's unopened packaging until ready for installation.
  3. Stack panels using protective dividers to avoid damage to decorative surface.
  4. For horizontal storage, store sheets on pallets of equal or greater size as the sheets with a protective layer between the pallet and sheet and on top of the uppermost sheet.
  5. Do not store sheets, or fabricated panels vertically.
- C. Handling:
  1. Remove protective film within 24 hours of the panels being removed from the pallet.
  2. When moving sheets, lift evenly to avoid dragging panels across each other and scratching the decorative surface.
  3. Remove all labels and stickers immediately after installation.

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## 1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Field Measurements: Verify actual measurements/openings by field measurements performed by the installer prior to release for fabrication. Recorded measurements to be indicated on shop drawings based on field measurements provided by the installer. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

## 1.7 WARRANTY

- A. Warranty: At project completion, provide manufacturer's limited ten year warranty covering defects in materials.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Trespa International B.V.; P.O. Box 110, 6000 AC Weert Wetering 20, 6002 SM Weert The Netherlands; [www.trespa.com](http://www.trespa.com).
- B. Acceptable Manufacturer's Representative: HVG Façade Solutions; 29 Henderson Street, Turrella NSW 2205. Tel: 1300-881-712. Fax: (02) 9556-1975. Email: [sales@hvgfacades.com.au](mailto:sales@hvgfacades.com.au) Web: [www.hvgfacades.com.au](http://www.hvgfacades.com.au).
- C. Substitutions: Not permitted.
- D. Requests for substitutions will be considered in accordance with provisions of Section \_\_\_\_\_

### 2.2 WALL PANELS

- A. Solid High Pressure Laminate Wall Panels: Trespa Meteor by Trespa International as represented by HVG Façade Solutions.
  1. Material: Solid panel manufactured using a combination of high pressure and temperature to create a flat panel created from thermosetting resins, homogenously reinforced with wood-based fibers and an integrated decorative surface or printed décor.
  2. Colour on Primary Face: \_\_\_\_\_ colour with black reverse.
  3. Colour on Primary Face: \_\_\_\_\_ colour with white reverse.
  4. Colour on Primary and Reverse Faces: \_\_\_\_\_ colour on primary face and \_\_\_\_\_ colour on reverse face.
  5. Colour: As selected by the Architect from manufacturer's standard colour palette.
  6. Finish: Satin sheen.
  7. Finish: Gloss.
  8. Finish: Rock.
  9. Panel Core: Fire retardant (FR) black core.
  10. Panel Thickness: 6 mm
  11. Panel Thickness: 8 mm
  12. Panel Thickness: 10 mm
  13. Panel Thickness: 13 mm
  14. Panel Thickness: As indicated on the Drawings.
  15. Physical Properties:
    - a. Modulus of Elasticity: 9000 N/mm<sup>2</sup> minimum, ISO 178.
    - b. Tensile Strength: 70 N/mm<sup>2</sup> minimum, ISO 527-2.
    - c. Flexural Strength: 120 N/mm<sup>2</sup> minimum, ISO 178.
    - d. Thermal Conductivity: 0.3 W/mK, EN 12524.
    - e. Structural Performance:
      - 1) Panels, sub framing and attachment methods shall be designed to withstand the Design Wind Load as determined by the project façade engineer, or as determined by AS1170.2
      - 2) Normal to the plane of the wall, the maximum panel deflection shall not exceed L/150
      - 3) Normal to the plane of the wall between supports, deflection of the aluminum sub-framing members shall not exceed L/150.

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16. Fire Performance:
- Ignitability Index: 0 (AS1530.3)
  - Spread of Flame Index: 0 (AS1530.3)
  - Heat Evolved Index: 0 (AS1530.3)
  - Smoke Developed Index: 3 or better (AS1530.3)
17. Finish Performance: Electron Beam Cure resin in conformance with the following general requirements:
- Colour: As selected by the architect from manufacturer's standard colours or a custom colour to be matched by the panel supplier.
  - Humidity Resistance: No formation of blisters when subjected to condensing water fog at 100% relative humidity and 38 degree Celsius for 3000 hours, ASTM D 2247.
  - Salt Spray Resistance: Corrosion creepage from scribe line (1.6 mm max.) and minimum blister rating of 8 within the test specimen field, ASTM B117.
  - Weather Exposure: Accelerated - 3000 hours in Atlas Type Weatherometer using cycle of 90 minutes light and 30 minutes diminished light and demineralized water with a maximum colour change of 5 Delta E units from the original colour according to ASTM D-2244, with the exception of Uni-Colours A04.0.1/A10.1.8/A20.2.3/A17.3.5/A12.3.7 which will not deviate more than 10 Delta E units from original colour according ASTM D-2244.
  - Colour Stability: The decorative surface comply with classification 4 - 5 measured with the grey scale according to ISO 105 A02-93 (test method EN 438-2:29).
  - Microbial Characteristics: Will not support micro-organic growth (ISO 846).
- B. Mounting System:
- TS700 – Exposed fastening on metal sub framing.
  - TS200 – Concealed fastening on aluminium rail over metal sub framing.
  - Other installation systems - Include test documentation showing compliance with the performance criteria set forth in the specification and in accordance with the local building code.
- C. Metal Sub-structure: Aluminum sub-structure designed to withstand structural loading due to wind load and the dead load of the panel, painted as required to conceal behind the open joint of the attachment system.
- Extrusions, including corner closures, joint closures and vent screens, formed members, sheet, and plate shall conform with the recommendations of the manufacturer.
- D. Extruded Aluminum Trim: Colour as specified in the finish schedule.
- E. Fasteners (Concealed/Exposed): Fasteners shall be non-corrosive and as recommended by panel manufacturer. Exposed fasteners shall be coloured to match panels where required by the architect.
- F. Panel Corner Profile: Installer corner profiles and trim with fasteners as indicated on drawing \_\_\_\_\_ and as recommended by the manufacturer.

### 2.3 FABRICATION

- Panels: Solid High Pressure Laminate impregnated kraft paper wall panels with no voids, air spaces or foamed insulation in the core material. Accessory items in accordance with manufacturer's recommendations and approved submittals
- Panel Weight: 8 mm (10.8kg/m<sup>2</sup>), 10 mm (13.5 kg/m<sup>2</sup>), 13 mm (17.55kg/m<sup>2</sup>).
- Panel Bow: = 2 mm/m
- Panel Dimensions: Field fabrication shall be allowed where necessary, but shall be kept to an absolute minimum. All fabrication shall be done under controlled shop conditions when possible.
- Appearance: Panel lines, breaks, and angles shall be sharp, true, and surfaces free from warp and buckle

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## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Surfaces to receive panels shall be even, smooth, dry, and free from defects detrimental to the installation of the panel system. Notify Contractor in writing of conditions detrimental to proper and timely completion of the work.
- C. Confirm exterior substrate is plumb and level, with no deflection greater than 6 mm in 6100 mm.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install High Pressure Laminate cladding panels and sub-frame system in accordance with manufacturer's instructions.
- B. Install High Pressure Laminate wall panels plumb and level and accurately spaced in accordance with manufacturer's recommendations and approved submittals and drawings.
- C. Anchor panels and sub-framing securely per engineering recommendations and in accordance with approved shop drawings to allow for necessary movement and structural support.
- D. Fasten solid High Pressure Laminate wall panels with fasteners approved for use with supporting substrate.
- E. Do not install panels or component parts which are observed to be defective or damaged including, but not limited to: warped, bowed, abraded, scratched, and broken members.
- F. Do not cut or trim component parts during installation in a manner that would damage the finish, decrease the strength, or result in visual imperfection or a failure in performance. Return component parts with require alteration to the shop for re-fabrication or replacement.
- G. Install corner profiles and trim with fasteners appropriate for use with adjoining construction as indicated on the Contract Drawings and as recommended by manufacturer.

### 3.4 ADJUSTING AND CLEANING

- A. Remove masking or panel protection as soon as possible after installation. Any masking intentionally left in place after panel installation on an elevation, shall become the responsibility of the General Contractor to remove.
- B. Adjust final panel installation so that all joints are true and even throughout the installation. Panels out of plane shall be adjusted with the surrounding panels to minimize any imperfection.
- C. Repair panels with minor damage. Remove and replace panels damaged beyond repair as a direct result of the panel installation. After installation, panel repair and replacement shall become the responsibility of the General Contractor.
- D. Clean finished surfaces as recommended by panel manufacturer. After installation cleaning, cleaning during construction shall become the responsibility of the General Contractor.

END OF SECTION

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