

TECHNICAL MANUAL



terraçade°

CERAMIC FAÇADE SYSTEM

CONTENTS

| PAGE | SECTION |
|--|---|
| 03 04 | 01. Overview Safe Working Instructions |
| 05 | 02. System Description |
| 09 | 03. Structural Performance |
| 11 12 15 | 04. Technical Specifications Materials Schedule and Properties Fasteners |
| 16 18 19 20 21 22 | 05. Components Full Tile Profile Suspension Rail Elevation Suspension Rail Plan Jointing Channel and Trim Profiles Other Components |
| 23 25 26 27 28 29 30 31 32 33 34 35 36 37 | 06. System Design — Common Details Overview Section Detail Section Detail with Insulation Plan Detail Base Details Parapet Rail Setting Tool Metal Stud Backing Section Detail Metal Stud Backing Plan Detail Concrete/Masonry Backing Plan Detail Wood Stud Backing Section Detail Wood Stud Backing Plan Detail |
| 38 | 07. Installation |
| 43 | 08. Maintenance Guide |

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SAFE WORKING INSTRUCTIONS

Cutting Tiles

Silica dust can be liberated from the Terraçade TN tiles when they are cut. Chronic inhalation of crystalline silica has been associated with impairment of lung function. Please refer to SDS for Terraçade, which is available from Glen-Gery for further information. Care should be taken when cutting Terraçade TN tiles to maintain the exposure to crystalline silica below the Exposure Standard prescribed by OSHA. Safe working procedures should include:

- Utilizing a wet saw when cutting tiles. Contact the saw manufacturer for further details.
- Wearing appropriate personal protective equipment, such as approved dust mask and safety goggles, when utilizing power tools or abrasive hand tools on the tiles.
- Ensuring that dust is disposed of during clean up and disposal appropriately, by either wetting or vacuuming. (Refer to the diagram below).

Using Brick/Tile Saws or Power Saws

- Ensure that adequate personal protective equipment, such as approved safety glasses, gloves, dust mask and hearing protection, is worn.
- Use a wet saw to cut tiles, or ensure that adequate ventilation or dust extraction equipment is available if dry cutting is used.

Handling

- Handle suspension rails carefully to avoid cuts and abrasions. The use of appropriate gloves may be of benefit. Extra care should be taken when handling cut pieces of tiles.
- It is recommended that large packs of suspension rails be broken up, so that they may be handled individually.
- Ensure clear passage when moving the suspension rails and trims due to their size. Also allow for adequate storage of the suspension rails and trims to avoid trip hazards.
- Take care when handling cut tiles, to avoid cuts or abrasions from sharp surfaces or broken tiles.
- · Consider manual handling issues when lifting tiles.
- Ensure that an adequate number of people are available to support the weight of the roll when rolling out the membrane.

Storage/Protection of Adjacent Materials

- All materials should be stored to avoid damage. Particularly, ensure that the hangers on the suspension rails are protected from distortion and the edges and corners of the tiles are protected from chipping.
- Protect the tiles, rails and trims from exposure to rain, water or chemicals during storage.
- Ensure that pressurized water cleaning of any surrounding surfaces is conducted prior to the installation of the tiles.
- Protect aluminum components during chemical cleaning of nearby materials, especially acid cleaning.

Recommended Safety Protection



Face Masks approved to the relevant US Standards.



Safety Goggles and approved Hearing Protection to the relevant US Standards.



Clean up, wet down or vacuum.



Dispose containment of dust.

SYSTEM DESCRIPTION



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SYSTEM DESCRIPTION

Overview

TERRAÇADE IS AN INNOVATIVE TERRACOTTA FAÇADE SYSTEM DEVELOPED TO PROVIDE THE NATURAL BEAUTY AND AESTHETIC APPEAL OF TERRACOTTA TO YOUR PROJECT.

Terraçade TN has been designed to act as a rain screen and rear ventilated facade system. It is a lightweight system and is simple to install.

System Assembly

The Terraçade TN system is easily installed as the tiles are attached securely by a purpose designed vertical suspension rail. The system can be installed onto a timber framed, steel framed, concrete or masonry structural wall.

The Terraçade TN system is comprised of:

- A galvanized vertical suspension rail incorporating unique tile hangers,
- Lightweight clay tiles designed to fit securely onto the suspension rails,
- A vertical jointing channel,
- Fitment sponge,
- An air/water barrier.

In addition, trims are available to complement or highlight your design, including:

- External corners
- Surround trim that accommodates internal corners, windows, doors, bases and parapets.

Benefits of Terraçade TN

Terraçade TN is a rear ventilated facade, which creates an airspace outside the load-bearing wall. This minimizes thermal transfer to the building structure, improving comfort levels and providing energy savings. The airspace provides natural ventilation with a chimney effect, which facilitates the removal of heat, humidity and condensation away from the building structure. Terraçade TN tiles can be used in all environments including severe marine environments and areas subject to heavy industrial pollution. The coastal version incorporates ZAM® precoated steel or stainless steel suspension rails to ensure that the Terraçade TN will stand the test of time.

Tested Performance

The terracotta tile acts as part of a rain screen system, where the tile is the first line of defense against water penetration and must be used as part of a drainage assembly in conjunction with a water-resistant backing wall. An air/water barrier is available as part of the system's tested performance. The system has demonstrated structural and weather performance, as shown through the extensive wind load testing conducted to ASTM E330.

The physical properties of the Terraçade TN tiles has been extensively tested to criteria that indicate high resistance to damage from typical exposures.



SYSTEM DESCRIPTION Terraçade TN System with Joint Channel



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SYSTEM DESCRIPTION Terraçade TN System with Joint Channel



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STRUCTURAL PERFORMANCE



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STRUCTURAL PERFORMANCE System Performance for Wind Loads

Performance Tests for Wind Pressure

The Terraçade TN system has been tested for structural performance and has achieved the following the deflection criteria based on ASTM E330.

Transverse load tests (negative and positive) were conducted on the Terraçade system in accordance with ASTM E330. The tested assemblies included supporting stud framing (8 ft. studs) spaced at 16" (406 mm) on center. Horizontal hat channels were attached at 16" (406 mm) on-center through the sheathing to each stud with two #10 fasteners. Vertical Terraçade suspension rails, spaced at 24" (610 mm) on-center, were secured to each 18 gauge hat channel with two #10 fasteners. The tables below present the average ultimate and suggested allowable wind loads for installations following the attachment methods described in this manual. These are presented to assist the designer in determining appropriate support and attachment for the Terraçade system in various exposure conditions. Different design pressures may be selected using different safety factors as determined by the Engineer of Record according to construction documents and local code requirements.

A structural engineer should be consulted for conditions that vary from the above criteria. Design documentation should accommodate the ultimate wind pressures and fastener specifications for a particular project.

| Ultimate Load (Average) | | | | | |
|-----------------------------|---------------|------|---------------|-------|--|
| Structural | Negative Load | | Positive Load | | |
| Backing | psf | kPa | psf | kPa | |
| Wood Framing (2x4 SPF) | 187.98 | 9.00 | 208.52 | 9.98 | |
| Steel Framing (18 gauge) | 152.76 | 7.31 | 247.52 | 11.85 | |

| Suggested Maximum Design Load with Factor of Safety = 3 | | | | | |
|--|---------|---------|---------------|------|--|
| Structural | Negativ | ve Load | Positive Load | | |
| Backing | psf | kPa | psf | kPa | |
| Wood Framing (2x4 SPF) | 62.66 | 3.0 | 69.51 | 3.33 | |
| Steel Framing (18 gauge) | 50.92 | 2.44 | 82.51 | 3.95 | |

TECHNICAL SPECIFICATIONS



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TECHNICAL SPECIFICATIONS Materials Schedule and Properties

A list of the materials used in the Terraçade TN system is given below:

| Component | Material |
|--------------------------|--|
| 1. Tiles | Fired extruded clay tile. |
| 2. Suspension Rail | Standard – Galvanized (cold formed light galvanized sheet), or ZAM® pre-coated steel, or Stainless steel sheet grade 316. |
| 3. Visible Trims | Aluminum - All extrusions are aluminum Grade 6063-T5 and are produced to ASTM B221/B221M Standard Specification for Aluminum and Aluminum – Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Aluminum and Aluminum Allows – Extruded Rod, Bar, Solid and Hollow Shapes). Trims are available in: |
| | • Mill finish, which is expected to have a design life in excess of twenty-five years for medium atmospheric corrosivity (as defined in ISO 9223). |
| | Anodized finish in clear and black, which can have a design life in excess of forty years. |
| | Powder coated finish to AAMA 2604/AAMA 2605 in various colors, which can come with a guarantee of up to ten years. |
| | • Folded Metal Trims – These trims are available in Colourbond® or alternative finishes from other suppliers. |
| 4. Air and Water Barrier | For framed systems an air/water barrier can be supplied as part of the system's tested performance. The air / water barrier is a cross-woven polyolefin material that allows the egress of vapor from within the frame and includes an enhanced contour to facilitate the drainage of water that penetrates the exterior cladding. |
| 5. Fitment Sponge | Cross-linked polyolefin foam with rubber adhesive. |
| 6. Rail Setting Tool | Specially designed tool to maintain vertical continuity if multiple lengths of the suspension rail are butted end to end. |

Tile Properties:

| | Nominal Tile Dimensions | 12¹/₅" x 23¹/₅" (308 x 588 mm) | 12¹/ଃ" x 46³/₄" (308 X 1188 mm) |
|------------------------------|---|--|--|
| | Mass | 9.9 lb. (~4.5 kg) | 19.8 lb. (~9 kg) |
| | Number of tiles/ft² (/m²) | 0.5 (5.6) | 0.25 (2.7) |
| | Weight/ft ² (/m ²) | 5.1 lb. (25 kg) | 5.1 lb. (25 kg) |
| Cold water absorption tested | Cold water absorption | <8% | <8% |
| per ASTM C67. | Breaking Strength (Longitudinal) | 382.2 lbf (1.7 kN) | 382.2 lbf (1.7 kN) |
| | Breaking Strength (Transverse) | 1056.6 lbf (4.7 kN) | 1056.6 lbf (4.7 kN) |
| | Coefficient of Expansion | <0.02% | <0.02% |
| | Coefficient of Thermal Expansion | ~5.6 X 10 ⁻⁷ (°F) ⁻¹ (~1.0 x 10-6 (°C) ⁻¹) | ~5.6 X 10 ⁻⁷ (°F) ⁻¹ (~1.0 x 10-6 (°C) ⁻¹) |

* Glen-Gery Corporation reserves the right to change specifications without notice — February 2021. Check the Glen-Gery website for updated results. ZAM[®] is a registered trademark of Nisshin Steel.

TECHNICAL SPECIFICATIONS Materials Schedule and Properties

Suspension Rail and Trim Options

A table of the standard properties of the suspension rail and trim materials is given below:

| | Length | Coefficient of Thermal Expansion (10 ⁻⁶ /°F) | lyy (in4) | E (psi) |
|--|------------------------------------|--|---|--------------------------------|
| Galvanized Suspension Rails | 118 ⁷ / ₁₆ " | 6.5 | 1.14x10 ⁻¹ | 2.9x10 ⁷ |
| | (3008 mm) | 11.7 (10⁻⁵/°C) | 4.75x10⁴ (mm⁴) | 200 GPa |
| Stainless Steel Suspension Rails | 118 ⁷ /16" | 8.8-9.6 | 1.14x10 ⁻¹ | 2.76x10 ⁷ |
| | (3008 mm) | 15.9-17.2 (10-6/°C) | 4.75x10 ⁴ (mm ⁴) | 190 GPa |
| ZAM® Pre-Coated Steel Suspension Rails | 118 ⁷ /16" | 5.9 | 1.14x10⁻¹ | 3.05x10 ⁷ |
| | (3008 mm) | 10.7 (10 ⁻⁶ /°C) | 4.75x10⁴ (mm⁴) | 210 GPa |
| Aluminum Trim | 144" (3658 mm) | 6.5 11.7 (10⁻ ⁶ /°C) | | 1.0 x10 ⁷ 69 GPa |

Please ensure to create sufficient gaps between rails and trims to accommodate thermal expansion of the materials. For details on gaps refer to page 42.

Suspension Rail Material Selection

The potential for corrosion, including factors such as distance from the coast, weather/climate conditions and exposure should be considered when determining the appropriate material for suspension rails. ZAM[®] Pre-Coated Steel and stainless steel rails are available where enhanced corrosion resistance is required.

Fitment Sponge Properties

The properties of the fitment sponge are given below:

| Physical Property | Fitment Sponge Value | Standard |
|---------------------------|--|---------------------|
| Dimensions | 1 ³ /16" X ⁹ /16" X ¹ /2" | |
| Water Absorption (7 days) | 0.5 lb./ft ² | ASTM D1667 |
| Tear Strength | 7 lb./in | ASTM D3575 |
| Tensile Strength | 65 psi | ASTM D3575 |
| Compressive Strength | 25% @ 5 psi, 50% @ 15 psi | ASTM D3575 Suffix D |
| Elongation | 140% | ASTM D3575 |

TECHNICAL SPECIFICATIONS Materials Schedule and Properties

Air/Water Barrier Properties

The properties of the Terraçade air/water barrier are given below:

| | AIR/WATER BARRIER | |
|--|----------------------|---|
| Physical Property | Fitment Sponge Value | Standard |
| Roll Dimensions (ft.) | 9 x 105 | |
| Weight of complete Roll (lb) | 20 | |
| Thickness (in.) | 0.02 | |
| Tensile Strength, MD/TD (lb./in.) | 56/30 | ASTM D882 |
| Trapezoid Tearing Strength, MD/TD (lb./in.) | 25/41 | ASTM D4533 |
| Water Resistance (min.) | >120 | ASTM D779 |
| Water Penetration Resistance (cm H_20) | >600 | AATCC-127 |
| Drainage Efficiency (% water drained) | >90% | ASTM E 2273 |
| Water Vapor Permeance (perm) | 16/18 | ASTM E 96 (Desiccant / Water Method) |
| Water Vapor Transmission Rate (g/m²/24 hr.) | 111/125 | ASTM E 96 (Desiccant/Water Method) |
| Air Permeance (L/s/m² @ 75 Pa) (cfm/ft² @ 1.57 psi) | 0.001 0.000 | ASTM E 2178 |
| Air Resistance / Wall Assembly (L/s/m² @ 75 Pa) (cfm/ft² @ 1.57 psf) | <0.01 0.00 | ASTM E 2357 |
| Air Leakage Rate / Air Resistance (cfm/ft² @ 75 Pa / 25 mph) | 0.01 | ASTM E 283 |
| Structural Integrity (minimum 1 hr. @ 500 Pa/65 mph) | Pass | ASTM E 330 (Procedure A) |
| Water Resistance (15 min. @ 27 Pa/15 mph) | Pass | ASTM E 331 |
| Flame Spread Smoke Developed | 0 (Class A) 15 | ASTM E 84 |

TECHNICAL SPECIFICATIONS Fasteners

Fasteners with performance equivalent to or exceeding the performance of those shown in the table below are recommended for attaching the suspension rail to subframe and should be used in accordance with the allowable pressures of the system. Connections to the primary structure should be as specified by the engineer. Design documentation should accommodate the allowable pressures and fastener specifications for a particular project.

| Substrate | Туре | Size | Recommended Min. Embedment | Grade |
|--|-----------------------------------|-----------------------------|--------------------------------|-----------------------------|
| Metal | Hex Head Self- Drilling Screw | #10-16 x 1 ¹ /4" | Metal thickness plus 3 threads | SS 18-8 SS 304 SS 316 |
| Joint Channel to Suspension Rail | Pan head self-tapping screw | #6 x ½" (min.) | Metal thickness plus 3 threads | SS 304 |

The above table is a guide to anchorage selection and does not alleviate the designer's responsibility to ensure the anchorage chosen is fit for purpose.

All fasteners are to be manufactured to meet the requirements of ASME J78 and ASME B18.6.3.





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| Component Description | Page Number |
|--|----------------|
| Terraçade TN Tile Vertical Suspension Rail | 18 19 & 20 |
| Aluminum Jointing Channel | 21 |
| Aluminum External Corner | 21 |
| Aluminum Surround Profile | 21 |
| Fitment Sponge Air/Water Barrier Rail Setting Tool | 22 22 22 |

COMPONENTS Terraçade TN Tile Profile



General tolerances for tiles: +/- 1% on all dimensions.

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Terraçade TN Suspension Rail – Elevation



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Terraçade TN Suspension Rail – Plan



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Surround Trim, Corner Trim and Joint Channel



TOP RESTRAINT CLIP



ALUMINUM JOINT CHANNEL



TWO-PIECE ALUMINUM SURROUND PROFILE



ALUMINUM EXTERNAL CORNER

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COMPONENTS Other Components

Fitment Sponge



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SYSTEM DESIGN



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SYSTEM DESIGN

| Standard Details | Page Number |
|--|-------------|
| SD-01 Overview | 25 |
| SD-02 Section Detail | 26 |
| SD-03Section Detail with Continuous Insulation | 27 |
| SD-04 Plan Detail | 28 |
| SD-05 Base Details | 29 |
| SD-06 Parapet Details | 30 |
| SD-07 Rail Setting Tool | 31 |
| SD-08 Cold-Formed Steel Backing Section Detail | 32 |
| SD-09 Cold-Formed Steel Plan Detail | 33 |
| SD-10 Masonry Wall Section Detail | 34 |
| SD-11 Masonry Backing Plan Detail | 35 |
| SD-12 Wood Frame Backing Section Detail | 36 |
| SD-13 Wood Frame Backing Plan Detail | 37 |

SYSTEM DESIGN Overview – SD 01



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SYSTEM DESIGN Section Detail – SD 02



Handy Tip: Fitment sponges should be fitted immediately prior to installation of tiles.

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SYSTEM DESIGN

Section Detail with Continuous Insulation – SD 03



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SYSTEM DESIGN Plan Detail – SD 04



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SYSTEM DESIGN Base Details – SD 05





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SYSTEM DESIGN Parapet Details – SD 06





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Handy Tip: The Rail Setting Tool maintains the vertical continuity of the system when joining rails one above the other. The tool is slotted onto the rails and then removed when both rails are fixed.

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SYSTEM DESIGN

Cold-Formed Steel Backing Section Detail – SD 08



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SYSTEM DESIGN

Cold-Formed Steel Backing Plan Detail – SD 09



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SYSTEM DESIGN Masonry Backing Section Detail – SD 10



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SYSTEM DESIGN Masonry Backing Plan Detail – SD 11



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SYSTEM DESIGN

Wood Frame Backing Section Detail – SD 12



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SYSTEM DESIGN

Wood Frame Backing Plan Detail – SD 13



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INSTALLATION



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INSTALLATION

Components

THE TERRAÇADE TN SYSTEM IS EASILY INSTALLED AS THE TILES ARE SECURELY ATTACHED BY PURPOSE DESIGNED SUSPENSION RAILS.

The speed of installation of the tiles and the effectiveness of the panel support system is dependent on achieving close control of tolerances in the fastening of the vertical support system. The unique design of the vertical suspension rails ensures that the vertical module distance is maintained within the rail.

Preparation

- 1. Ensure that adequate structural members are available to fasten the suspension rails to. Additional structural members may be necessary to accommodate certain conditions. Design documentation should accommodate these requirements.
- 2. Specify adequate weather protection measures for the structural backing wall. For framed systems, an air/water barrier is available as part of the system. Alternative membranes can be used where properties are equivalent or exceed those listed in the table on page 13 or minimum criteria of applicable building codes.
- Determine the set-out of tiles, based upon the design requirements. The tiles could be set from the base, the top or from any important structural features.
- **4.** Determine the quantities of the components required for a particular design.
- **5.** Obtain the correct fasteners, as per the fastener table, for the design.
- 6. Ensure that the installers are aware that irregularities of flatness in backup wall must be shimmed or accommodated for, to ensure that the suspension rails are installed correctly.



Diagram 1

Examination of Substructure

- 7. Examine back-up wall for compliance with design requirements (check for discrepancies with drawings, cracks and other possible air leakage sources).
- 8. Ensure that adequate support structure is available to comply with the project requirements.
- **9.** The maximum horizontal or vertical deviation of a surface from a plane surface (bow) in any 6.6 ft. (2 m) length;
 - Structural Tolerance ³/₁₆" (5 mm)
 - Non-Structural Framework Tolerance ¹/₈" (3 mm)

Set Out and Coordination

- 10. Establish and coordinate set-out lines, following design requirements for the set-out of the tiles. For example, the design may require that the tile module is spaced from an important feature or be designed to reduce cut tiles around a window. (See below diagrams 1 and 2).
- 11. Install any secondary framing necessary to support suspension rails including bimetallic separation, line and level.
- **12.** Confirm that required spacing for support centers of rail has been achieved.



Diagram 2

INSTALLATION Components

Installation of Air/Water Barrier

13. Install air/water barrier as applicable to the system. Check for holes and gaps and ensure compliance with the manufacturer's requirements.

The air/water barrier is available for framed structures in rolls of 9 ft. high. The air/water barrier must be installed in accordance with the manufacturer's instructions and recommendations.

a. Where air/water barrier is required to be joined the minimum overlap required for a vertical lap is 6" (150 mm) and for a horizontal lap 4" (100 mm). Ensure that upper layers overlap over lower layers and stagger vertical joints.

Installation of Suspension Rails, Flashings and Trims

- **14.** Cut suspension rails to size, if necessary, paying particular attention to top and bottom termination and fastening points. (See below diagram 3).
- 15. Install vertical suspension rails, ensuring that the rails are installed straight and plumb and as per the design specifications (with particular reference to the fastener table and the allowable pressures). A level line, spirit level or laser level can be used to ensure accuracy. Note that vertical misalignment between adjacent rails must not exceed ¹/₃₂" (1 mm).
- **16.** A rail setting tool should be used to ensure continuity of the vertical module when more than one suspension rail is required in one vertical line.
 - a. When attaching a suspension rail above a pre-attached suspension rail, loosely attach the top suspension rail using the slot holes punched in the rail.

b. Engage the rail setting tool onto the two rails by slotting it over the hangers. (See diagram 5, next page).

Once the top suspension rail is positioned correctly and is vertically plumb and level tighten the fastenings and lock the suspension rail into place.

- c. Remove the set-out tool for use elsewhere.
- **17.** Place fitment sponge vertically onto the suspension rail at the position shown in diagram 6. Four sponges are required per tile. (See *diagram 6, next page*).
- **18.** Do not leave the fitment sponge exposed to sunlight for more than 24 hours.
- **19.** Install any flashings that may be necessary to maintain the building air seal and weather tightness at openings or adjacent claddings.
- **20.** Check to ensure that all flashings (corners, at each interstory location, around all openings etc.) are continuous and complete.
- **21.** If an interstory flashing is required the vertical leg must be integrated with the air/water barrier and the horizontal leg must extend over the surround trim profile below. (See diagram 8, page 42).
- **22.** Surrounds shall be fixed to the suspension rail at a maximum $23^{5}/_{8}$ " (600 mm) centers with four $1/_{2}$ " (12.5 mm) rivets or fasteners. Corner trims shall be fixed with gussets to the suspension rail with a minimum of three $1/_{2}$ " (12.5 mm) rivets or fasteners for both suspension rail and trim. (See below diagram 4).



Diagram 3

Diagram 4

INSTALLATION



 Sponge Set Out

Diagram 6

41

INSTALLATION

Installation of Tiles

- Commence installation of tiles starting from the base and working upwards, ensuring horizontal set out lines are maintained.
 - a. Install tiles onto the vertical suspension rail by initially placing the top receiver of the tile securely on the top hanger. Lift the base of the tile and tilt inwards slightly to engage the bottom hanger. Check that the tile has been securely engaged visually and by physically moving the tile. (See below diagram 7).
 - b. Tiles can be cut using a wet saw with appropriate continuous rim diamond blades. Surround trims are used to capture cut tiles. (See *details SD05 and SD06 on pages 29 and 30*).
- 24. Insert vertical aluminum jointing channels and fix them mechanically using blind rivets or screws at maximum 23⁵/s" (600 mm) centers. 3M VHB tape may be used to position the joining strip prior to mechanical fixing.
- **25.** Brush down or sponge with a moist cloth on completion to remove loose material.

Notes:

- a. Every length of suspension rail should be fastened at least at one position in the 2 round holes. That is, do not use only the slots to fasten the suspension rail.
- b. Engage the rail-setting tool onto the two rails by slotting it over the hangers.

- c. If a secondary framing system is required, its suitability should be confirmed with a structural engineer.
- d. It is difficult to remove individual tiles from a wall as it requires "shuffling" of immediately adjacent tiles. The use of trims should prevent this shuffling as the top tile becomes locked into position.
- If necessary to drill additional holes in the suspension rail, they must not be drilled adjacent to the punched hangers. The only exception occurs when drill holes are required at the top and bottom of the suspension rail, for example at the top plate, or bottom of a wall.
- f. Where multiple lengths of the support rails are butted end to end it is recommended that the rail-setting tool supplied is used to ensure tolerances are maintained.
- g. The suspension rails are designed to accommodate the thermal expansion for full lengths when placed using the rail-setting tool. Cut rails should not be butted against one another. A vertical gap of ³/₁₆" (5 mm) should be left between the rails to accommodate thermal expansion.
- h. If installing tiles on a rake, the tile weight must be supported at least at two locations.





Diagram 7

42

MAINTENANCE GUIDE



For the most up to date information on Terraçade products and the latest version of this manual, please refer to our website; <u>www.glengery.com/products/wall-systems/terracade</u>

MAINTENANCE GUIDE

For Terraçade Façade System Components

1. System Inspection

It is recommended that the Terraçade façade system be inspected at regular intervals to ensure the integrity of the system. The inspection interval will vary according to the sub-frame and trim components utilized in the system. Below is a summary of cleaning and maintenance information.

2. Cleaning Tiles

Terraçade tiles are a natural terracotta product and are therefore virtually maintenance free. If you wish to remove any dirt or pollution grime that has built up over time, simply lightly hose or sponge down the tiles with water.

The tiles should be washed down during installation using a sponge with water and a neutral pH cleaner and then rinsed off with clean water. For ongoing maintenance the tiles may be hosed or sponged to remove dust and the build-up of dirt. Normally, cleaning the tiles will be as easy as letting the rain do the work for you.

3. Aluminum Trims

- a. Care & Maintenance Instructions: A simple regular clean will minimize the effects of weathering and will remove dirt, grime and other build-up detrimental to all powder coatings.
- b. Recommended cleaning method: Just a gentle clean with a soft brush and mild detergent diluted in water, followed by a fresh water rinse, will maintain the long-term performance of your powder coated products. In rural or normal urban environments cleaning should occur every 12 months. In areas of high pollution, such as industrial areas, geothermal areas or coastal environments, cleaning should occur every three months. In particularly corrosive locations, such as beachfronts, severe marine environments or areas of high industrial pollution, cleaning should be increased to monthly.

c. Recommended cleaning products: To protect the surface of your powder coated products, do not use strong solvents, abrasive cleaning products or those products that are recommended for thinning various types of paints. If you need to remove splashed paint, sealants or mastics from your powder coated products, you can use mineral spirits. When using mineral spirits, cleaning should be carried out in shade and during cooler temperatures using a soft cloth and gentle wiping only. It is also recommended that, prior to use, a small non-visible area of your powder coated products be tested to ensure that no visual color change or damage will occur, particularly with bright and deep colors.

4. Sealing Tiles

Terraçade tiles have a hard wearing surface that is resistant to most normal staining agents. In particularly difficult environments, for instance high traffic city areas, Terraçade may be exposed to graffiti vandalism or buildup of carbon dirt from passing motor vehicle traffic. A high quality impregnating (penetrating), breathable sealer can be used to make the surface easier to clean and prevent permanent staining as much as possible.

5. Replacing Individual Tiles

It is difficult to remove individual tiles from a wall as it requires "shuffling" of immediately adjacent tiles. It may be more practical to break the damaged tile with a rubber mallet so that it can be removed piece by piece. Care must be taken if this option is used as falling or sharp pieces of tiles may cause injuries.

To place a new tile into position, insert the top edge of the tile beneath the bottom edge of the tile above. Shuffle the tile above up slightly, ensuring that is restrained from falling (an assistant may be helpful). Capture the tile on the top hook first and then the bottom hook. Check that the tile and the tiles above are fully engaged by visual and manual checks.



QUALITY GUARANTEE

terraçade[®]

CERAMIC FAÇADE SYSTEM

Glen-Gery's continued commitment to quality and innovation ensures that Terraçade® will remain the benchmark for excellence for many years to come. Our tradition and experience have made Glen-Gery the first choice for many architects, builders and designers.

Terraçade TN has a warranty of 20 years on the system and a l00 year warranty on colorfastness and durability. Contact Glen-Gery Corporation to have an architectural consultant visit you with samples and technical information, or to discuss your next project.

Please note: Photographs should be considered indicative of color and texture only. Variations in color and shade are inherent in all clay fired products. All Terraçade tiles and accessories should be ordered at the same time to avoid the possibility of batch to batch variations. No responsibility will be accepted for color selection, matching, blending and any other physical or color related defects once the tiles have been incorporated into any construction.

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A BRAND OF



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