

Thin Tech®

TECHNICAL DATA AND TEST RESULTS



Thin Tech[®]

Technical Data and Test Results

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TECHNICAL DATA

System Weight: 7-10 psf for thin brick up to $\frac{3}{4}$ " x $\frac{3}{8}$ " x $11\frac{5}{8}$ "
Weights for specific brick sizes available in [Thin Brick Profile](#)
Panel weight is 1 psf

Compatible Unit Heights: $2\frac{1}{4}$ ", $2\frac{5}{8}$ ", $2\frac{3}{4}$ ", $3\frac{5}{8}$ ", $7\frac{5}{8}$ ", $11\frac{5}{8}$ "
Panels with custom support tie coursing to accommodate other/custom heights available subject to minimum order

Support Tie Coursing: 3 courses to 8" ($2\frac{11}{16}$ ", 2.67") for $2\frac{1}{4}$ " brick
5 courses to 16" ($3\frac{3}{16}$ ", 3.2") for $2\frac{5}{8}$ ", $2\frac{3}{4}$ " brick
4" for $3\frac{5}{8}$ " brick
8" for $7\frac{5}{8}$ " brick
12" for $11\frac{5}{8}$ " brick
Other/custom coursing available subject to minimum order

Metal Panel: 26-gauge, stucco embossed, G-90 Hot-Dipped Galvanized steel with a thermoset protective coating

Fasteners: Carbon steel with silver ceramic coating (1000 hr.) #10, pan head, #2 square drive
Sharp point: wood framing/concrete/masonry
Self-drilling: metal framing

Starter Angle: 26-gauge stainless steel (20-gauge when horizontal leg \geq 3")

Fire Rating: Maintains fire rating when used with UL-listed assemblies

TEST RESULTS – STRUCTURAL PERFORMANCE AT UNIFORM LOAD

Tests performed by: Architectural Testing, Inc.

Test Method: ASTM E330

Test Samples: The test wall assemblies were 8'0" wide x 8'0" high and constructed using 2" x 4" wood studs, spaced 16" on center, nominal 1/2" thick DensGlass® sheathing, DuPont™ Tyvek® building wrap and Thin Tech *Elite* panels with thin brick applied with Franklin International construction adhesive and joints filled with Type S pre-blended mortar.

TEST RESULTS: Deflection at Design/Test Load

Deflections reported were taken on the span between end and center stud (L/360). Loads were held for 10 seconds

| Pressure | Deflection |
|-----------------------|------------|
| 100.25 psf (positive) | 0.07" |
| 100.25 psf (negative) | 0.05" |

Permanent Deformation at Proof Load

Permanent sets were taken on the span between end and center stud (L/360). Loads were held for 10 seconds

| Pressure | Deformation |
|-----------------------|-------------|
| 160.42 psf (positive) | <0.01" |
| 155.40 psf (negative) | <0.01" |

TEST RESULTS – WATER PENETRATION AT UNIFORM LOAD

Tests performed by: Architectural Testing Inc.

Test Method: ASTM E331

Test Samples: The test wall assemblies were 8'0" wide x 8'0" high and constructed using 2" x 4" wood studs, spaced 16" on center, nominal 1/2" thick DensGlass sheathing, DuPont Tyvek building wrap and Thin Tech *Elite* panels with thin brick applied with Franklin International construction adhesive and joints filled with Type S pre-blended mortar.

| Load | Result |
|----------------------|------------|
| 15.04 psf (positive) | No leakage |

TEST RESULTS – SURFACE BURNING CHARACTERISTICS

Tests performed by: Intertek

Test Method: ASTM E84

Test Samples: The test specimen was 2'0" wide x 8'0" long, consisting of Thin Tech *Elite* panels applied over 1/4" cement board, thin brick adhered with Franklin International construction adhesive and joints filled with mortar meeting ASTM C270, Type N by proportion. The specimen was tested with the brick side to flame.

TEST RESULTS: Flame Spread Index (FSI) 0
Smoke Developed Index (SDI) 0
*These results indicate compliance with the requirements of IRC/IBC Class A

TEST RESULTS – FIRE RESISTANCE

Tests performed by: Intertek

Test Method: ASTM E119

Test Samples: The test specimen was 10'0" wide x 10'0" long, and constructed using one layer of 5/8" Type X gypsum board, 3 5/8" deep, 20-gauge galvanized steel studs, spaced 24" on center with horizontal bracing, one layer of 5/8" thick exterior sheathing, Hohmann and Barnard Enviro-Barrier™ VP, 4" thick GreenGuard XPS insulation, Kingspan® GreenGuard® seam tape, and Thin Tech *Elite* panels with 1/2" thin brick applied with Glen-Gery heavy-duty construction adhesive and joints filled with Glen-Gery Color Mortar Blend.

TEST RESULTS: Interior Exposure/Non-Loadbearing:
Meets conditions of acceptance for fire resistance period of 1 hr. (60 min.)

Exterior Exposure/Non-Loadbearing:
Meets conditions of acceptance for fire resistance period of 1 hr. (60 min.)

TEST RESULTS – BOND STRENGTH

Tests performed by: Architectural Testing, Inc.

Test Method: ASTM C297

TEST RESULTS: Peak Load (lbf) 936.80
Peak Stress (psi) 53.95
Cohesive Failure (%) 90

TEST RESULTS – IMPACT BY WINDBORNE DEBRIS

Tests performed by: Architectural Testing, Inc.

Test Method: ASTM E1886/E1996

Test Samples: The test specimen was 10'0" wide x 10'0" long, and constructed using one layer of $\frac{5}{8}$ " Type X gypsum board, $3\frac{5}{8}$ " deep, 20-gauge galvanized steel studs, spaced 24" on center with horizontal bracing, one layer of $\frac{5}{8}$ " thick exterior sheathing, fluid applied air and water barrier, 4" thick GreenGuard XPS insulation, and Thin Tech *Elite* panels with $\frac{1}{2}$ " thin brick applied with Glen-Gery heavy-duty construction adhesive and joints filled with Glen-Gery Color Mortar Blend.

TEST RESULTS:

| | |
|--------------------------------|----------|
| Missile Weight: | 9.17 lb. |
| Missile Length: | 8' 4" |
| Muzzle Distance from Specimen: | 17' 0" |

| Missile Velocity | Impact Area | Result |
|------------------|------------------------------|--|
| 15.1m/s | Center of wall between studs | Did not penetrate exterior building envelope |
| 15.5 m/s | Center of wall on stud | Did not penetrate exterior building envelope |
| 15.3 m/s | Bottom left corner of wall | Did not penetrate exterior building envelope |
| 24.6 m/s | Center of wall on stud | Did not penetrate exterior building envelope |
| 24.3 m/s | Center of wall between studs | Did not penetrate exterior building envelope |
| 24.2 m/s | Bottom right corner of wall | Did not penetrate exterior building envelope |

TEST RESULTS – FASTENER PERFORMANCE

Tests performed by: Architectural Testing, Inc.

Test Method: ASTM D1037

TEST RESULTS:

| | |
|------------------------|------------|
| Peak Withdrawal Load | 452.27 lbf |
| Peak Pull-Through Load | 644.49 lbf |

TEST RESULTS – SALT SPRAY EXPOSURE

Tests performed by: Architectural Testing Inc.

Test Method: ASTM B117

TEST RESULTS: No rust on punched or cut panel edges after 1000-hour exposure

NFPA 285 COMPLIANT WALL ASSEMBLIES

Thin Tech is included in numerous NFPA 285 compliant wall assemblies that meet the performance requirements of the IBC. Thin Tech was included as a tested component of the wall assembly including XPS insulation as summarized below. Glen-Gery assumes no responsibility for the results of assemblies including Thin Tech and polyisocyanurate insulation as these are provided by engineering judgments and Glen-Gery did not participate in the testing or certification process. Reports or engineering judgments on each assembly can be provided upon request.

Extruded Polystyrene (XPS) Insulation

Kingspan® GreenGuard®

| Missile Velocity | Material |
|---|---|
| Base Wall | Steel Studs: minimum 18-gauge, minimum 3 ⁵ / ₈ " depth at a maximum of 24" OC a) One layer 5/ ₈ " thick, Type X, gypsum wallboard on interior, b) with lateral bracing every 4' vertically |
| Floor Line Firestopping | 4 lb./cu ft. mineral wool in each stud cavity at the second story floor line |
| Cavity Insulation | Unfaced fiberglass batt insulation |
| Exterior Sheathing | 1/2" thick exterior type, glass mat faced gypsum sheathing |
| Water-resistive barrier applied to exterior sheathing | Hohmann & Barnard Enviro-Barrier VP, 20 mil |
| Exterior insulation | Type IV extruded polystyrene (XPS) board per ASTM C578. 4" maximum total thickness |
| Sealing of exterior insulation | Polyolefin film tape – maximum 3" width |
| Exterior Veneer | Glen-Gery Thin Tech <i>Elite</i> system with min. 1/2" thin brick |

Polyisocyanurate Insulation

Dupont™ Thermax™ up to 3"

| Wall Component | Material |
|---|---|
| <p>Base Wall System– Use either 1, 2, 3, 4 or 5</p> | <p>1 – Concrete wall 2 – Concrete Masonry wall 3 – Standard clay brick wall 4 – Steel studs: minimum 3½" depth, minimum 20-gauge at a maximum of 24" OC with: a) lateral bracing every 4' vertically b) One layer of ½" thick Type X gypsum wallboard on interior face of studs. Gypsum wallboard joints shall receive at a minimum a Level 2 finish with all fasteners covered with joint compound, or c) GCP Applied Technologies Monokote® Z-3306 installed at a minimum ¾" thickness over Thermax, or d) International Cellulose Corporation's Ure-K Thermal Barrier System installed at a minimum of 1¼" thickness over Thermax. 5 – FRTW Wood studs: nominal 2" x 4" or greater spaced at a maximum of 24" OC. a) Wall cavity empty (no insulation) or filled with fiberglass batt insulation (faced or unfaced) or mineral wool insulation (faced or unfaced). b) One layer of ½" thick Type X gypsum wallboard installed on interior face of wood studs. c) One layer of ½" thick Type X exterior gypsum sheathing installed on exterior face of wood studs. d) Minimum two top plates at floor lines. As an option, any thickness of plywood or OSB may be installed on exterior face of wood studs under exterior gypsum sheathing.</p> |
| <p>Exterior Cladding</p> | <p>1 – Glen-Gery Thin Tech <i>Elite</i> system with min. ½" thin brick</p> |
| <p>Exterior insulation – Use either 1 or 2</p> | <p>1 – None, exterior sheathing must be either ½" thick exterior gypsum sheathing or ½" thick, Type X exterior gypsum sheathing 2 – DuPont Thermax Brand Rigid Insulation – Total thickness to be a minimum of ½" to maximum of 3"</p> |
| <p>Floor Line Firestopping Cavity Insulation Exterior Sheathing Exterior insulation joint flashing Water-resistive barrier applied to exterior sheathing Weather-resistive barrier applied to exterior insulation Flashing of window, door and other exterior wall penetrations</p> | <p>See approved material options (as of 10/12/2021) at: https://www.dupont.com/content/dam/dupont/amer/us/en/performance-building-solutions/public/documents/en/ej-thermax-with-or-without-spf-nfpa-285-43-D100784-enUS.pdf</p> |

Polyisocyanurate Insulation

Hunter Xci CG and Xci CG (Class A) Exterior Insulation

| Wall Component | Material |
|---|--|
| Base Wall System– Use either 1, 2, 3, or 4 | 1 – Concrete wall 2 – Concrete Masonry wall 3 – Steel Studs: minimum 22-gauge, minimum 3 ⁵ / ₈ " depth, at a maximum of 24" OC with lateral bracing every 4' vertically a) One-layer ⁵ / ₈ " Type X gypsum wallboard interior 4 – FRTW studs: minimum nominal 2" x 4" dimension, spaced 24" OC (maximum) a) One layer ⁵ / ₈ " Type X gypsum wallboard interior b) Bracing as required by building code |
| Exterior Cladding | 1 – Glen-Gery Thin Tech <i>Elite</i> system with min. 1/2" thin brick |
| Exterior insulation – Use either 1 or 2 | 1 – 3 ¹ / ₂ " maximum thickness of Hunter Xci Foil (Class A) or Hunter Xci 286 2 – 4" maximum thickness of Hunter Xci Foil (Class A) or Hunter Xci 286 with non-combustible claddings. (Contact Hunter Panels for details regarding this option.) |
| Floor Line Firestopping Cavity Insulation Exterior Sheathing Exterior insulation joint flashing Water-resistive barrier applied to exterior sheathing Weather-resistive barrier applied to exterior insulation | See approved material options (as of 10/12/2021) at: Concrete Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1680-concrete-wall-cast-in-place-or-precast/file Concrete Masonry Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1681-concrete-masonry-wall-2 Steel Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1682-steel-stud-2 Fire Retardant Treated Wood Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1683-frtw-2 |

Polyisocyanurate Insulation

Hunter Xci Foil Class A and Xci-286 Exterior Insulation

| Wall Component | Material |
|--|--|
| Base Wall System – Use either 1, 2, 3, or 4 | 1 – Concrete wall 2 – Concrete Masonry wall 3 – Steel Studs: minimum 22-gauge, minimum 3 ⁵ / ₈ " depth, at a maximum of 24" OC with lateral bracing every 4' vertically a) One-layer ⁵ / ₈ " Type X gypsum wallboard interior 4 – FRTW studs: minimum nominal 2" x 4" dimension, spaced 24" OC (maximum) a) One layer ⁵ / ₈ " Type X gypsum wallboard interior b) Bracing as required by building code |
| Exterior Cladding | 1 – Glen-Gery Thin Tech <i>Elite</i> system with min. 1/2" thin brick |
| Exterior insulation – Use either 1 or 2 | 1 – 3 1/2" maximum thickness of Hunter Xci Foil (Class A) or Hunter Xci 286 2 – 4" maximum thickness of Hunter Xci Foil (Class A) or Hunter Xci 286 with non-combustible claddings. (Contact Hunter Panels for details regarding this option.) |
| Floor Line Firestopping Cavity Insulation Exterior Sheathing Water-resistive barrier applied to base wall/ exterior sheathing Water-Resistive barrier applied to exterior insulation | See approved material options (as of 10/12/2021) at: Concrete Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1680-concrete-wall-cast-in-place-or-precast/file Concrete Masonry Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1681-concrete-masonry-wall-2 Steel Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1682-steel-stud-2 Fire Retardant Treated Wood Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-foil-class-a/1683-frtw-2 |

Polyisocyanurate Insulation

Hunter Xci CG and Xci CG (Class A) Exterior Insulation

| Wall Component | Material |
|---|--|
| Base Wall System – Use either 1, 2, 3, or 4 | 1 – Concrete wall 2 – Concrete Masonry wall 3 – Steel Studs: Minimum 22-gauge, 3 ⁵ / ₈ " (minimum) spaced 24" OC (maximum) a) One layer ⁵ / ₈ " Type X gypsum wallboard interior b) Lateral bracing every 4' 4 – FRTW studs: minimum nominal 2" x 4" dimension, spaced 24" OC (maximum) c) One layer ⁵ / ₈ " Type X gypsum wallboard interior d) Bracing as required by building code |
| Exterior Cladding | 1 – Glen-Gery Thin Tech <i>Elite</i> system with min. 1/2" thin brick |
| Floor Line Firestopping Cavity Insulation Exterior Sheathing Water-resistive barrier applied to exterior sheathing/base wall Weather-resistive barrier applied to exterior insulation | See approved material options (as of 10/12/2021) at: Concrete Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-cg/1672-concrete-wall-precast-or-cast-in-place Concrete Masonry Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-cg/1673-concrete-masonry-wall Steel Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-cg/1674-steel-stud Fire Retardant Treated Wood Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-cg/1675-frtw |
| Exterior insulation – Use 1 or 2 | 1 – 3 ¹ / ₂ " maximum thickness of Hunter Xci CG and Xci CG (Class A) 2 – 4" maximum thickness of Hunter Xci CG and Xci CG (Class A) with non-combustible claddings (Contact Hunter Panels for details regarding this option.) |

Polyisocyanurate Insulation

Hunter Xci Ply and Xci Ply (Class A) Exterior Insulation

| Wall Component | Material |
|---|--|
| Base Wall System – Use either 1, 2, 3, or 4 | 1 – Concrete wall 2 – Concrete Masonry wall 3 – Steel Studs: 22-gauge, min. 3 ⁵ / ₈ " (minimum) spaced 24" OC (maximum) a) 5 ⁵ / ₈ " Type X gypsum wallboard interior b) Lateral bracing every 4" 4 – FRTW studs: minimum nominal 2" x 4" dimension, spaced 24" OC (maximum) a) 5 ⁵ / ₈ " Type X gypsum wallboard interior b) Bracing as required by building code |
| Exterior Cladding | 1 – Glen-Gery Thin Tech <i>Elite</i> system with min. 1/2" thin brick |
| Floor Line Firestopping Cavity Insulation Exterior Sheathing Water-resistive barrier applied to exterior sheathing/base wall Water-resistive barrier applied to exterior insulation | See approved material options (as of 10/12/2021) at: Concrete Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-ply/1684-concrete-cast-in-place-or-precast Concrete Masonry Wall: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-ply/1685-concrete-masonry-wall-3 Steel Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-ply/1686-steel-stud-3 Fire Retardant Treated Wood Stud: https://www.hunterpanels.com/docman-categories/technical-documents-wall-xci/baw-sheets/baw-2018-ply/1687-frtw-3/file |
| Exterior insulation – Use 1 or 2 | 1 – 4.2" maximum thickness of Hunter Xci Ply and Xci Ply (Class A), inclusive of factory adhered 5 ⁵ / ₈ " or 3 ³ / ₄ " fire treated plywood within overall maximum thickness 2 – 4.7" maximum thickness of Hunter Xci Ply and Xci Ply (Class A), inclusive of factory adhered 5 ⁵ / ₈ " or 3 ³ / ₄ " fire treated plywood within overall maximum thickness with non-combustible claddings (Contact Hunter Panels for details regarding this option.) |



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