ICC-ES Evaluation Report

ESR-4423

Reissued November 2023

Revised May 2024

Subject to renewal November 2024

This report also contains:

- LABC Supplement

- CBC Supplement

- FBC Supplement

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DIVISION: 06 00 00 — WOOD, PLASTICS AND COMPOSITES **Section: 06 16 43 — Gypsum Sheathing** **DIVISION: 07 00 00 — THERMAL AND MOISTURE PROTECTION** **Section: 07 25 00 — Water-resistive Barriers/Weather Barriers** **Section: 07 27 00 — Air Barriers** **DIVISION: 09 00 00 — FINISHES** **Section: 09 29 00 — Gypsum Board**	**REPORT HOLDER:** **TREMCO CPG, INC.**	**EVALUATION SUBJECT:** **SECUROCK® EXOAIR® 430 SYSTEM**	

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2021, 2018, 2015, 2012 and 2009 *International Building Code®* (IBC)
- 2021, 2018, 2015, 2012 and 2009 *International Residential Code®* (IRC)
- 2021, 2018, 2015, 2012 and 2009 *International Energy Conservation Code®* (IECC)
- 2015 and 2012 *International Green Construction Code™* (IgCC)

For evaluation for compliance with codes adopted by the Los Angeles Department of Building and Safety (LADBS), see the ESR-4423 LABC and LARC Supplement.

Properties evaluated:

- Water resistance
- Air leakage
- Structural
- Noncombustibility

- Surface-burning characteristics
- Physical properties
- Vapor retarder class
- Exterior walls of Types I, II, III and IV construction

1.2 Evaluation to the following green code(s) and/or standards:

- 2022 *California Green Building Standards Code* (CALGreen), Title 24, Part 11
- 2021, 2018, 2015 and 2012 *International Green Construction Code®* (IgCC)
- 2020, 2017, 2014 and 2011 ANSI/ASHRAE/USGBC/IES Standard 189.1–Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings
- 2020, 2015, 2012 and 2008 ICC 700 *National Green Building Standard™* (ICC 700-2020, ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

See Section 3.1

2.0 USES

SECUROCK® ExoAir® 430 System is a combination exterior wall sheathing, air barrier and water-resistive barrier system. This report qualifies the use of the SECUROCK® ExoAir® 430 System when installed with the SECUROCK® ExoAir® 430 Panels and flashing and sealants, as described in this report, on walls of all types of construction and dwellings under the IRC.

The SECUROCK® ExoAir® 430 System is intended for use as an alternate to the water-resistive barrier prescribed in Chapter 14 of the IBC and Chapter 7 of the IRC, as an air barrier material prescribed in accordance with 2021, 2018 and 2015 IECC Sections C402.5 and R402.4 [2012 IECC Sections C402.4 and R402.4 (2009 IECC Sections 402.4 and 502.4)]; IRC Section N1102.4 and IgCC Section 605.1.2, and as a component of an air barrier assembly in accordance with 2021 IECC Section C402.5.1.4 [2018 and 2015 IECC Section C402.5.1.2.2 (2012 IECC Section C402.4.1.2.2)].

The system is classified as a noncombustible material in accordance with 2021 IBC Section 703.3 [2018, 2015 and 2012 IBC Section 703.5 (2009 IBC Section 703.4)]. The $^{5}/_{8}$-inch-thick (15.9 mm) sheathing may be used as a component of exterior walls on buildings of Type I, II, III and IV construction when installed in accordance with Section 4.3..

3.0 DESCRIPTION

3.1 SECUROCK® ExoAir® 430 Panel:

SECUROCK® ExoAir® 430 Panel complies as a water-resistant core gypsum substrate in accordance with ASTM C1177 as specified in Table 2506.2 of the IBC and Section R702.3.1 of the IRC. The glass mat facer of the sheathing is treated to provide water resistance. The sheathing is classified as a Class A material when tested in accordance with ASTM E84 and is a noncombustible building material in accordance with ASTM E136. The sheathing is $^{5}/_{8}$-inch (15.9 mm) thick and 48 inches wide (1219 mm), has square edges and is available in lengths up to 12 feet (3.7 m).

When tested in accordance with ASTM E96 (water method), the $^{5}/_{8}$-inch-thick (15.9 mm) sheathing and sheathing with joint treatments meet the requirements for a Class III vapor retarder.

When tested in accordance with ASTM E2178, the sheathing has an air permeability less than 0.004 cfm/ft^2 (0.02 L/s•m^2) under a pressure differential of 0.3 inches of water gauge (75 Pa).

3.2 Components for Flashing and Sealing:

3.2.1 ExoAir® 230 Membrane: ExoAir 230 Membrane is a fluid applied, synthetic, vapor permeable air barrier which is factory-applied to the face of the ExoAir 430 sheathing and can be sprayed, rolled or trowel-applied. ExoAir® 230 is used as an air barrier membrane and can be used in conjunction with Securock® ExoAir® Reinforcing Mesh as a transition material.

3.2.2 Securock® ExoAir® Reinforcing Mesh: The reinforcing mesh is an open-weave fabric consisting of glass fiber yarn saturated with synthetic resins used as a reinforcing membrane around penetrations, on upturns and over cracks and non-moving joints.

3.2.3 Dymonic® 100: Tremco Dymonic 100 is a high-performance, medium-modulus, low-VOC, UV-stable, non-sag polyurethane sealant ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

3.2.4 Spectrem® 1: Tremco Spectrem 1 is an ultra-low modulus, high-performance, one-part moisture curing silicone joint sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT that may be used as an alternative to Dymonic 100 in accordance with Tremco instructions.

4.0 DESIGN AND INSTALLATION

4.1 Installation:

SECUROCK® ExoAir® 430 Panels must be attached to wall framing in accordance with ASTM C1280 (Standard Specification for Application of Gypsum Sheathing) and GA-253 (Application of Gypsum Sheathing) for IBC applications, or IRC Table R602.3 (1) and IRC Section R702.3.5 for IRC applications; the manufacturer's published installation instructions; and this report.

SECUROCK® ExoAir® 430 Panels must be attached with the coated side facing the exterior. Sheathing fasteners must be flush with the panel surface without countersinking through the glass mat facer. The sheathing must not be used as a nailing base and any attachments of exterior coverings must be made directly to the framing.

Sheathing exposed fastener heads must be sealed with the sealant described in Section 3.2.3 and 3.2.4 of this report to ensure the fastener heads are not exposed. The sheathing joints, openings, penetrations, and transitions must be sealed with the materials described in Section 3.2 of this report. The sheathing surface must be free of ice and frost during application of liquid flashing.

The SECUROCK® ExoAir® 430 Panels surface must be free of contaminants prior to the application of the liquid-applied flashing. Prior to sealing, treat all exposed gypsum edges with an approved primer. Apply Dymonic 100 over the sheathing joint in a zig-zag or ribbon pattern dispensed from a tube-type container and then spread evenly with a straight edge knife or trowel. Cover a minimum of 1 inch (25 mm) on both sides of the joints to achieve a 2-inch (51 mm) width of coverage. Apply at a rate to achieve a wet mil thickness of 21 mils over the entire area.

For the perimeter or openings, penetrations, terminations and transitions, flashing must be installed in accordance with Tremco CPG Inc. published installation instructions. See Figures 1, 2 and 3 of a typical joint, fastener, opening, penetration and transition sealing details.

The manufacturer's published installation instructions and this report must be strictly adhered to, and a copy of the instructions must be available at all times on the jobsite during installation.

4.2 Design:

4.2.1 Transverse Wind Resistance: SECUROCK® ExoAir® 430 Panels may be used to resist transverse wind loads as permitted by the applicable code for gypsum sheathing.

4.2.2 Shear Resistance: SECUROCK® ExoAir® 430 Panels may be used as components of conventional light framed walls for resisting shear loads when installed as described in this section.

4.2.2.1 Prescriptive Wall Bracing: The SECUROCK® ExoAir® 430 Panels are equivalent to gypsum sheathing for use as bracing to resist lateral loads due to wind and seismic forces as described in Section 4.2.2.1 of ESR-3044.

4.2.2.2 Engineered Shear Walls: The SECUROCK® ExoAir® 430 Panels may be used as a component of engineered shear walls when designed in accordance with Section 4.2.2.2 of ESR-3044.

4.3 Exterior Walls in Type I, II, III and IV Construction:

4.3.1 General: When used on exterior walls of Type I, II, III and IV construction, the assembly must comply with this section and Table 1.

4.4 Air Barrier Assembly:

SECUROCK® ExoAir® 430 Panels fastened to steel stud framing spaced a maximum of 24 inches (610 mm) on center, using No. 6 self-drilling screws spaced at 8 inches (203 mm) on center in the field and perimeter, leaving a $^{1}/_{8}$-inch (3.2 mm) gap between panels, forming an air barrier assembly when the gaps between the panels and the perimeter of penetrations are sealed with the liquid flashing and sealant as described in Section 4.1. The assembly has demonstrated an air leakage less than 0.004 cfm/ft^2 (0.02 L/s•m^2) under a pressure differential of 0.3 inches of water gauge (75 Pa) when tested in accordance with ASTM E2357.

4.5 Water-resistive Barrier Assembly:

The SECUROCK® ExoAir® 430 System when installed in accordance with Section 4.1 of this report may be used as an alternate to the water-resistive barrier prescribed in IBC Chapter 14 or IRC Chapter 7.

5.0 CONDITIONS OF USE:

The SECUROCK® ExoAir® 430 System described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The products must be manufactured, identified, and installed in accordance with this report, the manufacturer's published installation instructions and the applicable code. If there is a conflict between the manufacturer's published installation instructions and this report, this report governs.

5.2 When the sheathing is not installed as bracing, as described in Section 4.2.2.1, the stud walls must be braced by other materials in accordance with the applicable code.

5.3 The SECUROCK® ExoAir® 430 System must be covered with a code complying exterior wall covering.

5.4 The use on exterior walls of buildings of Type I, II, III and IV construction must be in accordance with Section 4.3 and Table 1.

6.0 EVIDENCE SUBMITTED

6.1 Reports of physical property testing in accordance with ASTM C473, for compliance with ASTM C1177.

6.2 Reports of surface-burning tests in accordance with ASTM E84 (UL 723).

6.3 Reports of noncombustibility tests in accordance with ASTM E136.

6.4 Report of testing in accordance with NFPA 285.

6.5 Report of tensile bond testing in accordance with ASTM C297.

6.6 Reports of freeze-thaw testing.

6.7 Reports of water-resistance testing in accordance with ASTM D2247.

6.8 Reports of water-vapor transmission testing in accordance with ASTM E96 (desiccant and water method).

6.9 Reports of structural, racking, restrained environmental conditioning and water penetration testing using ASTM E1233, Procedure A, ASTM E72 and ASTM E331.

6.10 Reports of weathering testing.

6.11 Reports of water-resistance testing using ASTM E331.

6.12 Report of flashing tests with applicable AAMA 714 standard for liquid-applied flashing described in Section 3.2 of this report.

6.13 Report of air leakage tests in accordance with ASTM E2178 and ASTM E2357.

6.14 Quality documentation.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-4423) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, each SECUROCK® ExoAir® 430 Panels board is identified with a plant identifier and date code, the product name, and the board thickness.

The liquid flashing and sealants must be identified with the product name and company name described in Section 3.2 of this report.

7.3 The report holder's contact information is the following:

TREMCO CPG, INC.
3735 GREEN ROAD
BEACHWOOD, OHIO 44212
(800) 321-7906
www.tremcosealants.com

TABLE 1—NFPA 285 COMPLYING WALL ASSEMBLY

Base Wall System	Steel Studs (minimum $3^{5}/_{8}$-inch deep, minimum 16-gauge, maximum 16-inch OC) with one layer of $^{5}/_{8}$-inch Type X gypsum wallboard on the interior face
Floorline Firestopping	4 lb/ft^3 Mineral Wool in each stud cavity and at each floorline. Mineral wool to be attached with Z-clips or equivalent
Cavity Insulation	None
Exterior Sheathing and water-resistive barrier	$^{5}/_{8}$-inch thick, SECUROCK® ExoAir® 430 panels with joints finished with Dymonic 100
Exterior Insulation	Min. 2 inch Roxul,Inc. dba ROCKWOOL Cavityrock® stone wool insulation board (ESR-3773)
Flashing	Flash all exterior insulation joints with ExoAir® 230. Opening perimeters are protected with minimum 24-gage (0.033-inch-thick) galvanized steel flashing
Exterior Veneer	Metal Composite Material (MCM): Tremco Metalite Series 8000 MCM Wall Panel System (ESR-4474) utilizing 4 mm Mitsubishi Chemical America, Alpolic Division's Alpolic® /fr Wall Panels (ESR-2653)

In Plane Board Joints - 12969

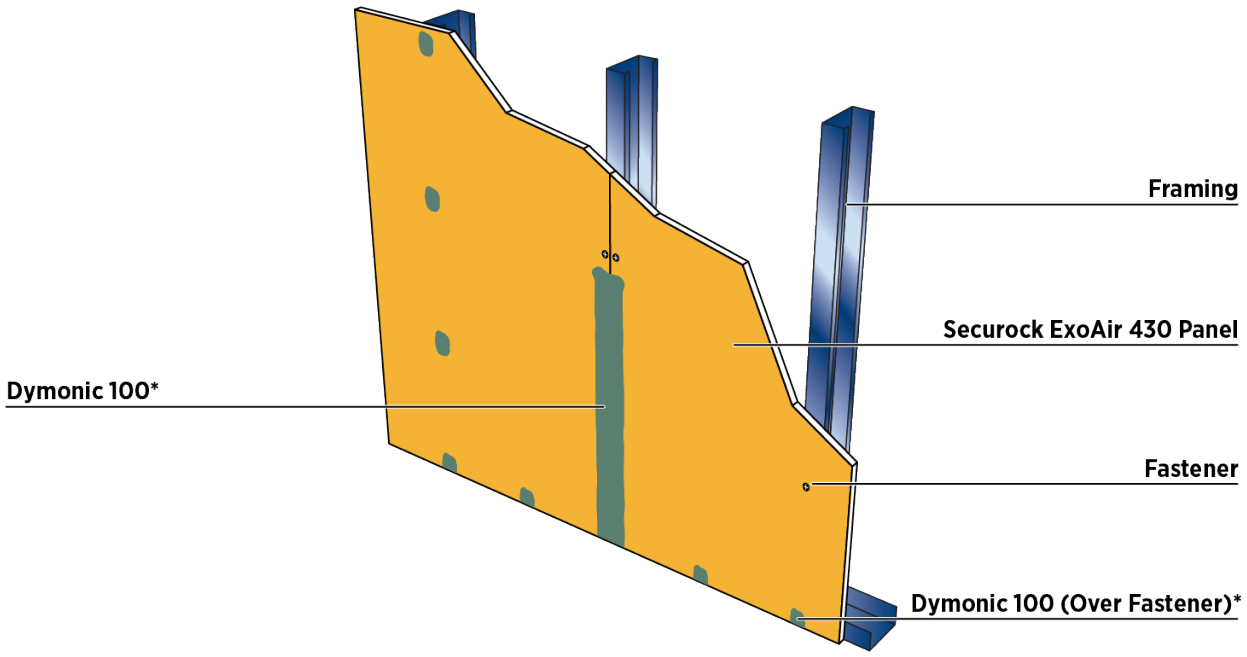

FIGURE 1

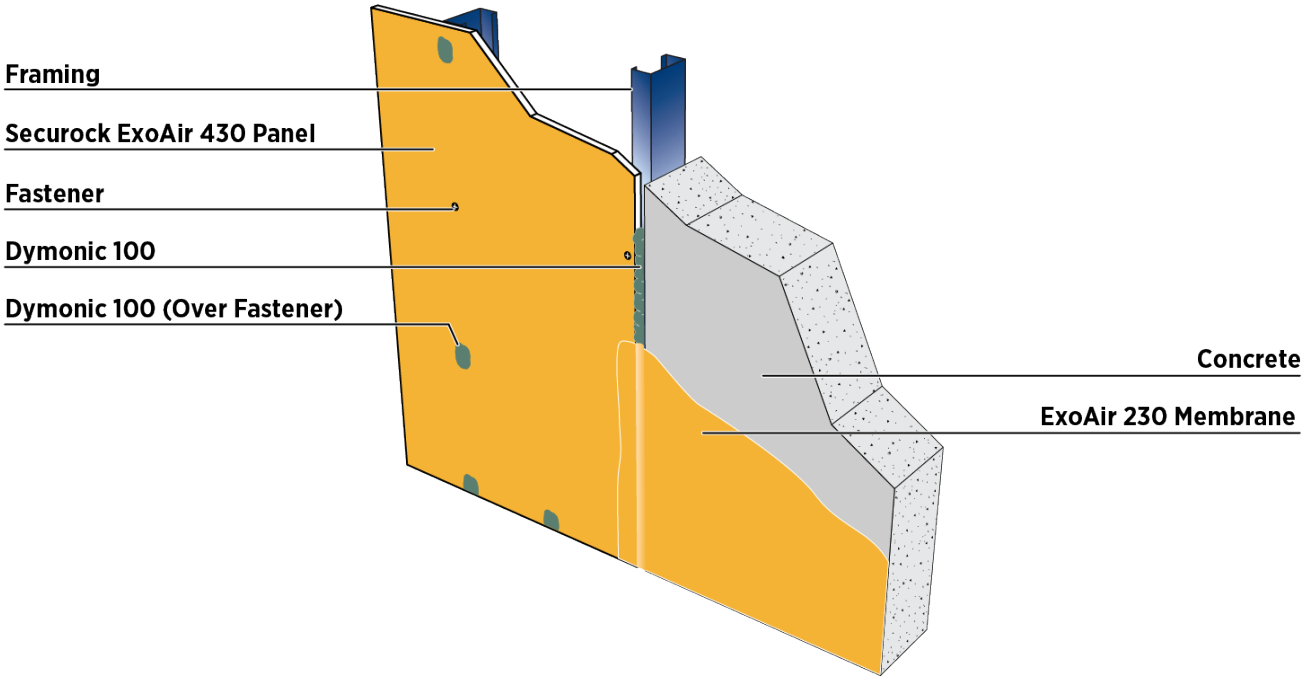

FIGURE 2

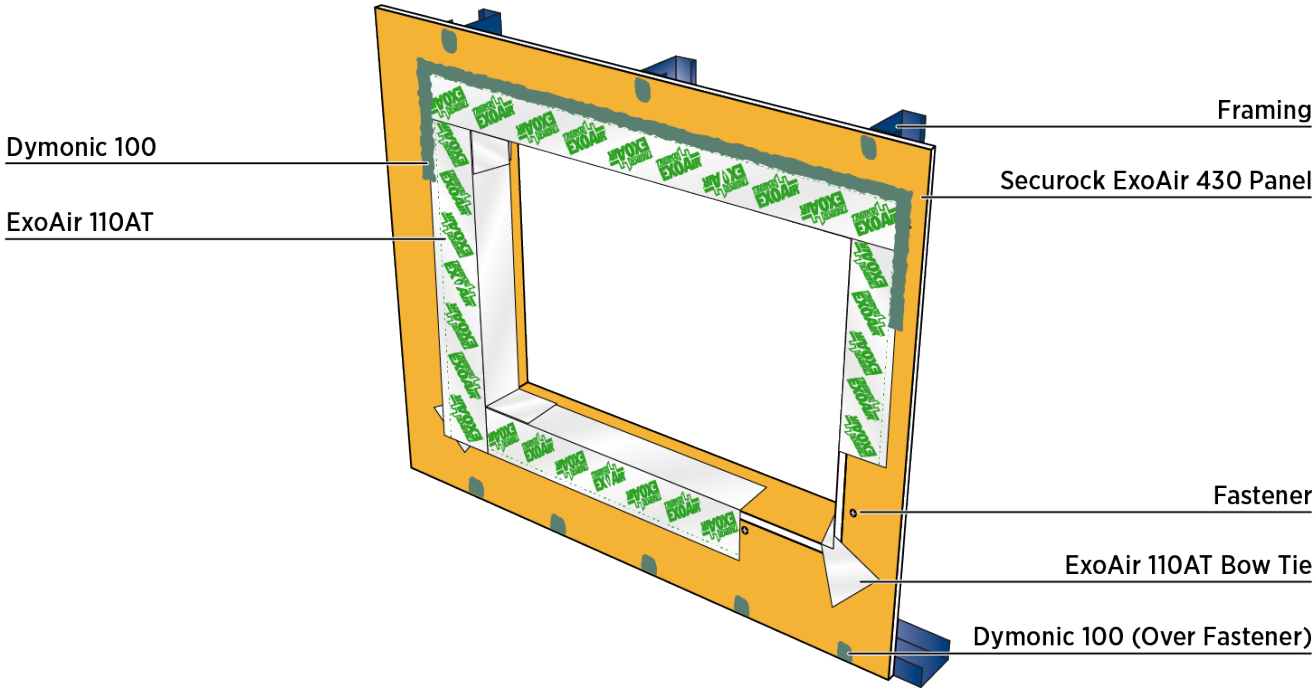

FIGURE 3

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 16 43—Gypsum Sheathing

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 25 00—Water-resistive Barriers/Weather Barriers
Section: 07 27 00—Air Barriers

DIVISION: 09 00 00—FINISHES
Section: 09 29 00—Gypsum Board

REPORT HOLDER:

TREMCO CPG, INC.

EVALUATION SUBJECT:

SECUROCK® EXOAIR® 430 SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that SECUROCK® ExoAir® 430 System, described in ICC-ES evaluation report ESR-4423, has also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2023 *City of Los Angeles Building Code* (LABC)
- 2023 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The SECUROCK® ExoAir® 430 System, described in Sections 2.0 through 7.0 of the evaluation report ESR-4423, complies with the LABC Chapters 7, 14, 22, 23 and 25, and the LARC Sections R602.10.4 and R703.2, and is subjected to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The SECUROCK® ExoAir® 430 System described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-4423.
- The design, installation, conditions of use and identification of the SECUROCK® ExoAir® 430 System are in accordance with the 2021 *International Building Code®* (IBC) and the 2021 *International Residential Code®* (IRC) provisions noted in the evaluation report ESR-4423.
- The design, installation and inspection are in accordance with additional requirements of the LABC Chapters 16 and 17, Sections 2305, 2306, 2308, and 2503, as applicable.
- The seismic design provisions for hillside buildings referenced in LABC Section 2301.1 have not been considered and are outside the scope of this supplement.

This supplement expires concurrently with the evaluation report, reissued November 2023 and revised May 2024.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 16 43—Gypsum Sheathing

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 25 00—Water-resistive Barriers/Weather Barriers
Section: 07 27 00—Air Barriers

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REPORT HOLDER:

TREMCO CPG, INC.

EVALUATION SUBJECT:

SECUROCK® EXOAIR® 430 SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the SECUROCK® ExoAir® 430 System, described in ICC-ES evaluation report ESR-4423, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2022 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2022 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The SECUROCK® ExoAir® 430 System**,** described in Sections 2.0 through 7.0 of the evaluation report ESR-4423, complies with 2022 CBC Chapters 7, 14, 22, 23 and 25, provided the design and installation are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 7, 14, 22, 23 and 25, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Chapters and Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Chapters and Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The SECUROCK® ExoAir® 430 System, described in Sections 2.0 through 7.0 of the evaluation report ESR-4423, complies with 2022 CRC Sections R602.10.4 and R703.2, provided the design and installation are in accordance with the 2021 *International Residential Code*® (IRC) provisions noted in the evaluation report and applicable requirements of the CRC.

This supplement expires concurrently with the evaluation report, reissued November 2023 and revised May 2024.

ICC-ES Evaluation Report

ESR-4423 FBC Supplement

Reissued November 2023
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This report is subject to renewal November 2024.

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
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TREMCO CPG, INC.

EVALUATION SUBJECT:

SECUROCK® EXOAIR® 430 SYSTEM

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that SECUROCK® ExoAir® 430 System, described in ICC-ES evaluation report ESR-4423, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The SECUROCK® ExoAir® 430 System, described in Sections 2.0 through 7.0 of the ICC-ES evaluation report ESR-4423, comply with the 2023 *Florida Building Code—Building* and 2020 *Florida Building Code—Residential.* The design requirements shall be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential*, as applicable. The installation must meet the requirements noted in the evaluation report ESR-4423 for the 2021 *International Building Code* (IBC) meet the requirements of the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable.

Use of the SECUROCK® ExoAir® 430 System for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated and is outside the scope of this evaluation report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality-assurance program is audited by a quality-assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official, when the report holder does not possess an approval by the Commission).

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