Securock® ExoAir® 430 Panel

FIRECODE® CORE

AIR BARRIER

WATER BARRIER

VAPOR PERMEABLE

DESCRIPTION

Securock® ExoAir® 430 Panel is a glass mat-faced, moisture- and mold-resistant gypsum panel, with a non-combustible core integrated with a factory-applied synthetic vapor permeable air/water barrier membrane available in 1/2″ and 5/8″. The in-plant application provides a uniform membrane with superior bond resulting in predictable air and water barrier performance and adhesion to the base panel. The panel is a component of the Securock ExoAir 430 Air Barrier System, to be installed using Tremco® sealants and transition membranes to achieve air barrier continuity. The panel is designed for use under a variety of exterior claddings, including open joint rain screens, where traditionally a separate gypsum sheathing panel and air barrier would have been used.

ADVANTAGES

- In-plant application ensures membrane uniformity and adhesion
- Membrane is not climate-dependent and not susceptible to wash out
- Panel eliminates sheathing preparation in the field
- UV and weather resistance allows the panel to be installed, sealed and left exposed while interior construction begins

INSTALLATION

Securock ExoAir 430 Panel is designed for use under exterior claddings where a conventional gypsum sheathing and air barrier system have traditionally been used. Common claddings include brick veneer, metal, stone or terracotta panels, shingle siding, shake siding and conventional stucco. It's imperative that the panel is installed with the Tremco approved sealants and transition materials to ensure a 100% monolithic barrier. See Installation Instructions (BE102) for specific details.

Manage sequence of installation of the Securock ExoAir 430 Panel and detailing components with other trades and systems to ensure continuity and compatibility. Once the building is enclosed, by whatever means, care should be taken to prevent excess moisture/humidity buildup on the interior side of the Securock ExoAir Panel. Avoid conditions during construction that result in excessive moisture load in the building. High moisture can cause condensation in the unfinished exterior walls and sheathing during periods of cold weather. Forced air heaters, wet masonry, poured concrete and finishing materials introduce large volumes of water vapor into the building. Use ventilation and mechanical dehumidification to reduce moisture levels to below the dew point temperature of the exterior air. Any damage resulting from insufficient interior moisture management during construction is not the responsibility of USG/CGC. At every point in the construction process, minimizing moisture exposure is the key to maximizing the performance of the finished assembly. Refer to Gypsum Association for information.

LIMITATIONS

1. Securock ExoAir 430 Panel shall not be used as a nail base for exterior cladding.
2. Specific requirements regarding framing spacing, fastener spacing and fastener specifics to provide required lateral wind-load resistance are the responsibility of the design professional. (Refer to technical data and specifications on the following pages.)
3. Not recommended for direct lamination to masonry surfaces. Use furring strips or framing.
4. Maximum stud spacing is 24″ o.c.
5. Securock ExoAir 430 Panel is not a finished surface.
6. Securock ExoAir 430 Panel is not intended for tile applications.
7. The Securock ExoAir 430 Panel, installed in accordance with the installation Instructions (BE102), shall not be left exposed for more than 12 months prior to the installation of cladding.
8. The Securock ExoAir 430 System must be installed using only Tremco approved sealants, Dymonic® 100 (in green), Spectrem® 1 (in purple).

PRODUCT DATA

Dimensions: 1/2″ and 5/8″ thick, 4′ wide, 8′ long

Weight, Nominal: 2.0 psf for 1/2″, 2.5 psf for 5/8″

Edge Configuration: Square edges

Membrane Thickness: Minimum 20 dry mils

Compliance with Standards: Meets or exceeds the physical property requirements of ASTM C1177. 5/8″ Securock ExoAir 430 Panel is UL Classified as to fire resistance, surface burning characteristics and core compatibility.

Fire Performance: Securock ExoAir 430 Panel has a noncombustible core when tested in accordance with ASTM E136. Fire resistance – 5/8″ panels meet the requirements of Type X as defined in ASTM C1396 and ASTM C1177 when tested in accordance with ASTM E119. Tested as a component of wall assemblies in accordance with NFPA285. Flame spread index of 20 and smoke developed of 15 when measured in accordance with ASTM E84. UL Classified as to fire resistance. See Underwriters Laboratories Fire Resistance Directory for specific designs.

Tensile Bond: Exceeds 15 psi requirements for both cementitious and acrylic adhesives per ASTM C297.

PANEL DATA

	5/8″ Securock® ExoAir® Panel Firecode X (UL Type USGX)	**1/2″ Securock® ExoAir® Panel**
Thickness	5/8″ (15.9 mm)	1/2″ (12.7 mm)
Length	8′ (2438 mm)	8′ (2438 mm)
Width	4′ (1219 mm)	4′ (1219 mm)
Weight, nominal	2.5 lb./sq. ft. (12.2 kg/m^2)	2.0 lb./sq. ft. (9.8 kg/m^2)
Edges	Square	Square

TECHNICAL DATA

PANEL PHYSICAL PROPERTIES		**5/8″ Securock® ExoAir® Panel Firecode X (UL Type USGX)**	**1/2″ Securock® ExoAir® Panel**
Tensile Bond, psi	ASTM C297	>15	>15
Tensile Bond, psi	ASTM C473		
Bearing edge perpendicular to board length, lbf.		>140	>100
Bearing edge parallel to board length, lbf.		>100	>80
Water Absorption		<10	<10
Nail-Pull Resistance, lbf. min.		90	80
Weight, psf nominal		2.5	2.0
Thermal Resistance, R (˚F ft^2.h/BTU)	ASTM C518	0.50	0.45
Nail Sealability	ASTM D1970, Section 8.9	Pass	Pass
Mold Resistance	ASTM D3273	10	10
Peel Adhesion, lbf./in.	ASTM D3330	pli >1	pli >1
Membrane Adhesion to Panel, 16 psi min.**	ASTM D4541	Pass	Pass
Water Vapor Permeance, perms	ASTM E96		
Base Panel, Wet Cup		34	40
Composite, Wet Cup		6	6
Air Permeance, 0.004 cfm/ft^2 @ 1.57 lb./ft^2 max.	ASTM E2178	0.0001 cfm/ft^2	0.0001 cfm/ft^2
Assembly Air Leakage, 0.04 cfm/ft^2 @ 1.57 lb./ft^2 max.	ASTM E2357	0.002 cfm/ft^2	0.002 cfm/ft^2
Assembly Water Penetration, 15 minutes @ 2.86 lb./ft^2	ASTM E331	Pass	Pass
Bending Radius*, Dry		9′	9′
Coefficient of Thermal Expansion, in./in./°F	ASTM E831	8.5x10-6	8.5x10-6
Water Resistance, @22 in./5 hrs.	AATCC 127-08	Pass	Pass
R-Value R (h. °ft^2.F/Btu		0.50	0.50
R-Value RSI (m^2.K/W)		0.088	0.079

*Recommended fastener spacing is 6″ o.c. when panels are bent.
**Tested at 70°F and 50% RH environmental conditions.

JOINT TREATMENT PHYSICAL PROPERTIES

Cyclic Movement	ASTM C719	
Dynomic 100		+/- 50%
Spectrum 1		+100 / -50%
Crack Bridging	ASTM C1305	
Dynomic 100		Pass
Spectrum 1		Pass
Elongation	ASTM D412	
Dynomic 100		800% Elongation @ 350 PSI
Spectrum 1		1000% Elongation @ 160 PSI

*For joint movement capabilities, refer to ASTM C719.

ALLOWABLE UNIFORM WIND LOAD (PSF) FOR 5/8″ THICK PANELS

Frame Spacing	**12″ O.C.**			**16″ O.C.**			**24″ O.C.**		
Fastener Spacing	4″	6″	8″	4″	6″	8″	4″	6″	8″
5/8″ allowable Pressure	96	67	50	75	50	38	34	27	25
1/2″ Allowable Pressure	75	35	26	40	26	26	26	17	16

Note: Applicable for both steel and wood framing. The sheathing can be installed perpendicular or parallel to the framing. Fasteners must have a minimum edge distance of 3/8″. The values in this table are based on testing per ASTM E330 and represent the capacity of the panel to resist flexural failure or fastener pull-through with a 3.0 factor of safety. Capacities are based on a minimum fastener head diameter of 0.325″ (#6 bugle head screw). The withdrawal resistance of fasteners from framing is different on several factors, including but not limited to fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the designer of record. Manufacturer's recommendations are given below. These capacities assume continuous support of each stud flange over the full length of the panel. Allowable Pressures are based on maximum deflection limitation of L/360. Consult USG representative for higher deflection limitations. Allowable pressure values are for short-term wind loads. Framing design is independent of these values. The design capacities of assemblies constructed with pneumatically driven fasteners are beyond the scope of this submittal sheet.

SUBMITTAL APPROVALS	Job Name	
	Contractor	Date

Product information
See securockexoair.com for the most up-to-date product information.

The product is warranted to be free of defects in materials at the time of shipment, but the manufacturer makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond the manufacturer's control and can affect performance, the manufacturer makes no other warranty, expressed or implied. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED. The manufacturer's sole obligation with respect to any product that fails to conform to the warranty set forth herein shall be, at its sole option, to replace or refund the purchase of the quantity of product proven to be defective.

Note
Products described here may not be available in all geographic markets.

Notice
We shall not be liable for any special, incidental or consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the extended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from the date it was or reasonably should have been discovered.

Safety First
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protection equipment.

Read SDS and literature before specification and installation.

USG | TREMCO
SECUROCK® EXOAIR® 430

p-e-i.com/reports.html

securockexoair.com

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