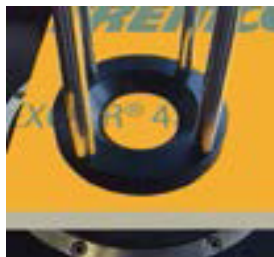


SECUROCK® EXOAIR® 430 SYSTEM TEST METHODS

AATCC 127 - STANDARD TEST METHOD FOR WATER RESISTANCE, HYDROSTATIC PRESSURE



Purpose	Determine resistance of the 430 panel to the penetration of water under hydrostatic pressure.
Requirement	Minimum of 22" (55 cm) for five hours
Third-Party Classification & Listing	PEI

aatcc.org/technical/test_methods/scopes/tm127.cfm

ASTM C297 - STANDARD TEST METHOD FOR FLATWISE TENSILE BOND STRENGTH OF SANDWICH CONSTRUCTION



Purpose	Determine the adhesive and cohesive strength of the composite assembly.
Requirement	15 psi min.
Third-Party Classification & Listing	PEI

astm.org/Standards/C297.htm

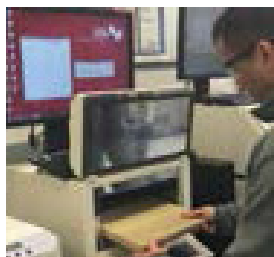
ASTM C473 - STANDARD TEST METHODS FOR PHYSICAL TESTING OF GYPSUM PANEL PRODUCTS



Purpose	Specify the minimum performance requirements for glass-mat sheathing (Flexural Strength, Nail Pull, Edge Hardness, Water Absorption & Dimension Tolerances).
Requirement	140 psi min. (length), 100 psi min. (width)
Third-Party Classification & Listing	UL & PEI

astm.org/Standards/C473.htm

ASTM C518 - STANDARD TEST METHOD FOR STEADY-STATE THERMAL TRANSMISSION PROPERTIES BY MEANS OF THE HEAT FLOW METER APPARATUS



Purpose	Measures the thermal conductivity (thermal resistance) of building materials
Requirement	Provide thermal resistance value, R (°F ft.2/BTU)
Third-Party Classification & Listing	None

astm.org/Standards/C518.htm

ASTM C719 - STANDARD TEST METHOD FOR ADHESION AND COHESION OF ELASTOMERIC JOINT SEALANT UNDER CYCLIC MOVEMENT (HOCKMAN CYCLE)



Purpose	Determine movement capability of Dymonic® 100 and Spectrem® 1.
Requirement	Typical movement capabilities range from +/- 25% to +100/-50%.
Third-Party Classification & Listing	SWRI & PRI

astm.org/Standards/C719.htm

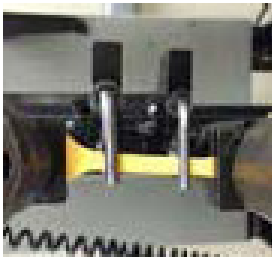
ASTM C1305 - STANDARD TEST METHOD FOR CRACK BRIDGING ABILITY OF LIQUID-APPLIED WATERPROOFING MEMBRANE



Purpose	To determine a waterproofing membrane's ability to maintain its integrity while bridging a preexisting crack in the substrate at low ambient temperatures, when the membrane is least likely to be flexible.
Requirement	Pass – Test five specimens. No cracking, splitting or pin-holes in the area of the joint following 10 temperature and movement cycles.
Third-Party Classification & Listing	None

astm.org/Standards/C297.htm

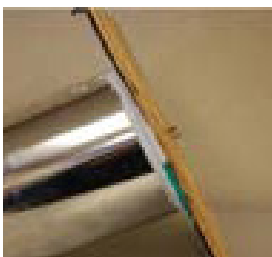
ASTM D412 - STANDARD TEST METHODS FOR VULCANIZED RUBBER AND THERMOPLASTIC ELASTOMERS - TENSION



Purpose	To determine if the 430 system's sealants exhibit adequate elastic properties to accommodate building movement
Requirement	Typical minimum requirement of membranes is 200%
Third-Party Classification & Listing	PEI

astm.org/Standards/C473.htm

ASTM D1970 - STANDARD SPECIFICATION FOR SELF-ADHERING POLYMER MODIFIED BITUMINOUS SHEET MATERIALS USED AS STEEP ROOFING UNDERLAYMENT FOR ICE DAM PROTECTION



Purpose	To determine the waterproof integrity of the 430 system's water-resistant barrier membrane with respect to self-sealability around a nail penetration subjected to a 5 in. head of water.
Requirement	No water passes through the specimen
Third-Party Classification & Listing	PEI

astm.org/Standards/D1970.htm

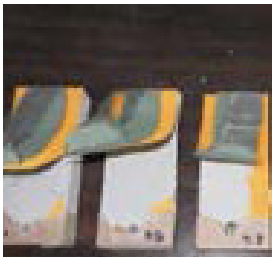
ASTM D3273 - STANDARD TEST METHOD FOR RESISTANCE TO GROWTH OF MOLD ON THE SURFACE OF INTERIOR COATINGS IN AN ENVIRONMENTAL CHAMBER



Purpose	To determine if the 430 base panel is resistant to mold growth using a 0 to 10 rating scale.
Requirement	10 rating, no mold growth
Third-Party Classification & Listing	MicroStar Lab tests, PEI lists

astm.org/Standards/D3273.htm

ASTM D3330 – STANDARD TEST METHOD FOR PEEL ADHESION OF PRESSURE-SENSITIVE TAPE



Purpose	To determine if the 430 system's sealants bond sufficiently to the 430 membrane when peeled at 90° angle.
Requirement	1.0 lbf/in. (pli) min.
Third-Party Classification & Listing	PEI

astm.org/Standards/D3330.htm

ASTM D4541 – STANDARD TEST METHOD FOR PULL-OFF STRENGTH OF COATINGS USING PORTABLE



Purpose	To determine the pull-off strength of the 430 coating to the base panel.
Requirement	16 psi min.
Third-Party Classification & Listing	PEI

astm.org/Standards/D4541.htm

ASTM E84 – STANDARD TEST METHOD FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS



Purpose	To determine the surface-burning characteristics of Securock ExoAir 430 panels.
Requirement	Flame spread index less than 25, smoke developed index less than 450
Third-Party Classification & Listing	UL

astm.org/Standards/E84.htm

ASTM E96 – STANDARD TEST METHODS FOR WATER VAPOR TRANSMISSION OF MATERIALS



Purpose	Determine the water vapor permeance of the 430 system, a measure of the ability of water vapor in air to pass through the 430 panel by diffusion.
Requirement	Permeance must be declared at installed thickness for both the water and the desiccant methods.
Third-Party Classification & Listing	PEI

astm.org/Standards/E96.htm

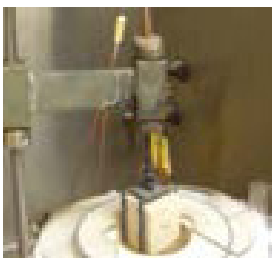
ASTM E119 – STANDARD TEST METHOD FOR FIRE TESTS OF BUILDING CONSTRUCTION AND MATERIALS



Purpose	Fire-resistance test used to establish the Type X designation of the 430 panel and to develop USG's portfolio of fire-resistance wall designs.
Requirement	Fire-resistance ratings can be found in the UL Online Certifications Directory (ul.com) listed on the UL Classification Card for File R1319 (CKNX) Type USGX.
Third-Party Classification & Listing	UL

astm.org/Standards/E119.htm

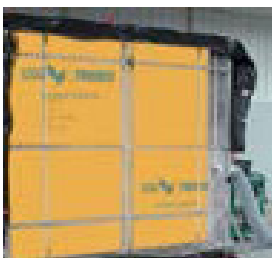
ASTM E136 – STANDARD TEST METHOD OF BEHAVIOR OF MATERIALS IN A VERTICAL TUBE FURNACE AT 750°C



Purpose	Determine the combustion characteristics of the 430 base panel..
Requirement	Noncombustible gypsum core
Third-Party Classification & Listing	UL

astm.org/Standards/E136.htm

ASTM E331 – STANDARD TEST METHOD FOR WATER PENETRATION OF EXTERIOR WINDOWS, SKYLIGHT, DOORS, AND CURTAIN WALLS BY UNIFORM STATIC AIR PRESSURE DIFFERENCE



Purpose	Determine the ability of the Securock ExoAir 430 system to resist water penetration when exposed to water spray and air pressure for classification as a water-resistive barrier.
Requirement	No leaks after 15 minutes at 137 Pa
Third-Party Classification & Listing	PEI

astm.org/Standards/E84.htm

ASTM E831 – STANDARD TEST METHOD FOR LINEAR THERMAL EXPANSION OF SOLID MATERIALS BY THERMOMECHANICAL ANALYSIS



Purpose	To determine the thermal expansion coefficient for the 430 panel when subjected to temperature variations.
Requirement	Provide coefficient of linear thermal expansion, (in./in.·°F)
Third-Party Classification & Listing	None

astm.org/Standards/E831.htm

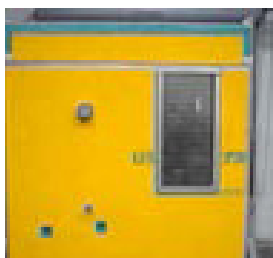
ASTM E2178 – STANDARD TEST METHOD FOR AIR PERMEANCE OF BUILDING MATERIALS



Purpose	To determine the air permeance of the 430 panel for classification as an air barrier material.
Requirement	0.004 cfm/ft ² @ 1.57 lb/ft ² max. air penetration
Third-Party Classification & Listing	PEI

astm.org/Standards/E2178.htm

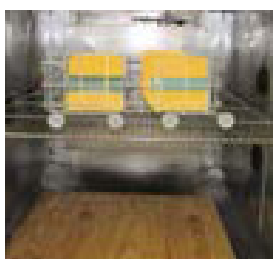
ASTM E2357 – STANDARD TEST METHOD FOR DETERMINING AIR LEAKAGE OF AIR BARRIER ASSEMBLIES (INCLUDES ASTM E283 TEST METHOD FOR RATE OF AIR LEAKAGE THROUGH EXTERIOR WINDOWS, CURTAIN WALLS AND DOORS UNDER SPECIFIC PRESSURE DIFFERENCES ACROSS THE SPECTRUM) ADHESION TESTERS



Purpose	To determine if the installed Securock® ExoAir® 430 system performs as required for classification as an air barrier assembly.
Requirement	0.04 cfm/ft ² @ 1.57 lb/ft ² max. air leakage rate
Third-Party Classification & Listing	PEI

astm.org/Standards/E2357.htm

ASTM E2485 – STANDARD TEST METHOD FOR FREEZE/THAW RESISTANCE OF EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) AND WATER RESISTIVE BARRIER COATINGS



Purpose	To determine the effect of repeated freezing and thawing cycles on the physical integrity of 430 panels.
Requirement	No cracking, checking, crazing, erosion or other characteristics, such as delamination or indications of delamination between components that may affect performance as a water-resistive barrier.
Third-Party Classification & Listing	PEI

astm.org/Standards/E2485.htm

NFPA 285 – STANDARD FIRE TEST METHOD FOR EVALUATION OF FIRE PROPAGATION CHARACTERISTICS OF EXTERIOR NON-LOAD-BEARING WALL ASSEMBLIES CONTAINING COMBUSTIBLE COMPONENTS



Purpose	Fire test procedure for evaluating the suitability of exterior, non-load-bearing wall assemblies and panels used as components of curtain wall assemblies that are constructed using combustible materials or that incorporate combustible components for installation on buildings where the exterior walls are required to be noncombustible.
Requirement	Pass/fail criteria that flame propagation must not extend either vertically or horizontally beyond specified acceptable distances from the area of flame plume impingement on or within the two-story wall test assembly. In addition, thermocouples placed throughout the test wall must not exceed defined temperature limits.
Third-Party Classification & Listing	UL

astm.org/Standards/E831.htm

LONG-TERM EXPOSURE TESTING – 12 MONTHS UNDER VARYING CONDITIONS



Purpose	Test the 430 panel's endurance to natural exposure to regional weather and UV. Panel strength, membrane bond to base panel, water resistance, color change and sealant adhesion performance are all measured. Locations are Auburn, WA, Phoenix, AZ, Libertyville, IL, and Jacksonville, FL.
Requirement	Performance not impacted due to any visual cracking or color change.
Third-Party Classification & Listing	None

astm.org/Standards/E2178.htm

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