

Roof Boards with a PLUS





USG LEADING THE BUILDING MATERIALS INDUSTRY



For more than 100 years, USG has been a leader in producing innovative products and systems to build the environments in which we live, work and play. As the inventor of wallboard and mineral wool ceiling tile, USG helped create North America's building materials industry. Our flagship brands are recognized around the world and include Securock® brand high-performance roof boards, Sheetrock® brand gypsum panels, Durock® brand cement boards and Donn® suspension systems.

USG is North America's leading producer of gypsum wallboard, joint compound and a vast array of related products for the construction and remodeling industries. We are also a leader in the manufacture of ceiling suspension systems and are widely recognized for our premier acoustical panels and specialty ceiling systems. Our family of products provides creative building solutions that set new standards for productivity and efficiency, helping contractors and architects deliver high-quality and innovative designs. This same level of dedication has gone into creating a portfolio of high-performing roofing products.

Our steadfast dedication to the company's core business beliefs—integrity, safety, performance, quality, diversity, innovation and service—has helped us consistently manufacture the quality products that you expect, backed by the service and support you can depend upon. Our commitment to the roofing industry is to deliver a selection of high-quality and high-performing products that give roofing professionals a better choice in the roof board category.

USG OFFERS A BETTER CHOICE



Securock® Gypsum-Fiber Roof Board

A high-performance, versatile board that uses advanced fiber-reinforced technology for a uniform and durable product, this particular roof board is ideal for all types of adhered roofing systems including single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

Moisture and Mold Resistant

- Homogeneous composition provides uniform water resistance throughout the panel
- Scores a 10, the highest score for mold resistance, on ASTM D3273

Superior Bond

- Independent testing shows exceptional adhesion in fully adhered systems
- Excellent wind-uplift performance

Outstanding Performance

- No face layer to delaminate
- High-density board stands up to foot traffic and hail
- Extremely low absorption can reduce adhesive use and significantly decrease installation costs

Ouick Installation

- Easy to cut
- Itch-free

Environmentally Friendly

- Made from 95 percent recycled materials
- Independently certified by Scientific Certification Systems
- Independently certified for low VOC Emissions by Berkeley Analytical

Choice

• 4' x 4' and 4' x 8' boards available in 1/4", 3/8", 1/2" and 5/8" thicknesses



USG OFFERS A BETTER CHOICE



Securock® Glass-Mat Roof Board

A high-performance, non-combustible, moisture and mold resistant roof board that is ideal for use in mechanically attached, fire barrier and thermal barrier applications. It enhances the durability of the entire roofing system when used as cover board in single-ply mechanically attached systems and has several performance and handling attributes that make it superior to competitive products.

Exceptional Handling and Installation

- A high-quality tight mat creates less itch when handling and cutting versus Georgia-Pacific DensDeck® roof board
- Increased mat-to-core tensile bond strength makes it less likely to delaminate when cutting
- Scores and snaps cleanly and easily

Outstanding Performance

- Provides protection to roof system from foot traffic and hail
- Greater mat-to-core tensile bond strength than Georgia-Pacific DensDeck roof board
- Meets Factory Mutual (FM) Class 1 and Underwriters Laboratories (UL) Class A fire ratings for unlimited slope in fire barrier applications per UL 790

Excellent Moisture and Mold Resistance

- Fiberglass face and back with treated core resists moisture and mold
- Scores a 10, the highest score for mold resistance, on ASTM D3273

Choice

• 4' x 8' boards available in 1/4", 1/2" and 5/8" thicknesses



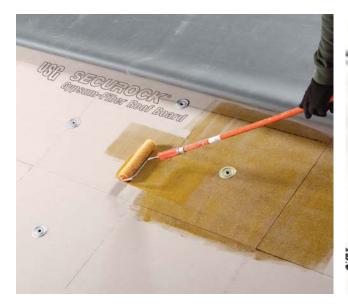
USG ROOF BOARD PORTFOLIO



Choosing the Right Board

Securock Gypsum-Fiber roof board outperforms the competition and is made from 95 percent recycled material. Securock Glass-Mat roof board meets stringent industry performance requirements and specifications while being easier to handle than competitive glass-mat roof boards. Plus, both boards come with the customer service, flexibility and responsiveness that only USG can deliver. All of this adds up to a roof board portfolio that goes above and beyond to meet the needs of any application.

Applications	SECUROCK Gypsum-Fiber Roof Board Securock Glass-Mat Roof Board	
Single-ply mechanically attached	Acceptable	Recommended
Single-ply adhered	Recommended	Not Recommended
Modified bitumen torch applied	Recommended	Not Recommended
Modified bitumen cold applied	Recommended	Not Recommended
Modified bitumen hot mopped	Recommended	Not Recommended
Built-up roof	Recommended	Not Recommended
Built-up roof hybrid	Recommended	Not Recommended
Self-adhered	Recommended	Not Recommended
Spray foam	Recommended	Not Recommended
Thermal barrier	Acceptable	Recommended
Fire barrier	Acceptable	Recommended
Vapor barrier substrate	Acceptable	Recommended





Securock Gypsum-Fiber Roof Board



High-performance gypsum-fiber roof board for use in low-slope commercial roofing systems

- Exceptional bond and low absorption in adhered systems
- Moisture and mold resistant
- Excellent wind-uplift performance
- Manufactured from 95% recycled material

Description

Securock® Gypsum-Fiber roof board is a high-performance roof board for use in low-slope roofing systems. Its unique, fiber-reinforced, homogenous composition gives the panel strength and water resistance through to the core. Securock Gypsum-Fiber roof board provides exceptional bond and low absorption in adhered systems and with its homogenous composition achieves high wind-uplift ratings with no risk of facer delamination. Made from 95% recycled material, Securock Gypsum-Fiber roof board combines superior performance with sustainable design for all types of roofing systems including single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

Advantages

Exceptional Strength Engineered to provide superior wind-uplift performance for a wide variety of roof assemblies. Securack Gypsum-Fiber roof board has uniform composition providing enhanced bond strength of membrane systems with no risk of facer delamination.

Fire Performance Provides excellent fire performance and demonstrates exceptional surface burning characteristics (ASTM E84 (CAN/ULC-S102) Flame Spread 5, Smoke Developed 0).

Moisture and Mold Uniform water-resistant core ensures excellent moisture and mold resistance. Scored a maximum "10" for mold resistance on ASTM D3273.

Versatile Can be used as a component in single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

Sustainability Made from 95% recycled materials and has earned independent certification from Scientific Certification Systems for this achievement.

Limitations

- Securock Gypsum-Fiber roof board is engineered to perform within a properly designed roof system. The use
 of Securock Gypsum-Fiber roof board as a roofing component is the responsibility of the design professional.
- Consult roofing manufacturers for specific instructions on the application of their products to Securock Gypsum-Fiber roof board
- Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse
 effects on the performance of the roof system and are beyond the control of USG.
- Keep Securock Gypsum-Fiber roof board panels dry before, during and after installation. Securock Gypsum-Fiber roof board should not be installed during rains, heavy fogs and any other conditions that deposit moisture on the surface of the board. Apply only as much Securock Gypsum-Fiber roof board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.
- For re-roof or re-cover applications, existing roofing system must be dry throughout prior to application of Securock Gypsum-Fiber roof board.
- Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
- Securock Gypsum-Fiber roof board should be stored flat and off the ground with protection from the weather.
 If stored outdoors, a breathable waterproof covering should be used.
- When applying solvent-based adhesives or primers, allow sufficient time for the solvent to evaporate to avoid damage to roofing components.
- USG allows the bonding of cold mastic modified bitumen and torching directly to the surface. Consult with the system manufacturer for recommendations on this application.
- USG recommends maximum asphalt application temperature for Type III asphalt of 455 °F when using Securock Gypsum-Fiber roof board. Application temperatures above these recommended temperatures may adversely affect roof system performance.

Installation

- Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into
 the Securock Gypsum-Fiber roof board, flush with the surface. Fasteners should be installed in strict compliance
 with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29.
 Proper fastener spacing is essential to achieve wind-uplift performance.



- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of Securock Gypsum-Fiber roof board. Butt board edges and ends loosely in typical installations. Long, uninterrupted runs (greater than 200 feet) of Securock Gypsum-Fiber roof board will require slight gapping due to thermal expansion.
- See product data table below for maximum flute span when panels are applied directly over metal decking.
- For vertical parapet applications, only 1/2" or 5/8" panels should be used. Maximum framing spacing is 24" o.c.

Fire Performance

- UL Classified as to Surface Burning Characteristics and Non-Combustability in accordance with ASTM E84 (CANVULC-S102)
 - Flame Spread 5 and Smoke Developed 0
- 1/4", 3/8", 1/2" and 5/8" Thickness Class A in accordance with UL790 (CAN/ULC-S107). See the UL Building Materials Directory for more information.
- 5/8" Thickness Meets requirements of Type X per ASTM C1278 and may be used in P series designs as a thermal barrier.

System Performance

- FM Approved
 - Complies with requirements of FM 4450 and FM 4470
 - Meets FM Class 1

Standards Compliance

Securock Gypsum-Fiber roof board is manufactured to conform to ASTM C1278, "Standard Specification for Fiber-Reinforced Gypsum Panel."

Physical Properties

	SECUROCK Gypsum-Fiber Roof Board				
	1/4" (6.6 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)	
Width, standard	4' (1220 mm)	4' (1220 mm)	4' (1220 mm)	4' (1220 mm)	
Length, standard	4' (1220 mm) and 8' (2440 mm)				
Pieces per unit for 4' x 8' sheets	50	40	30	24	
Weight, nominal lbs./unit, 4' x 8' sheet	2,575	2,575	2,725	2,525	
Weight, nominal lbs./sq. ft.	1.57	1.96	2.76	3.20	
Flexural strength, parallel, lbs. min., per ASTM C 473	40	70	110	161	
Compressive strength, psi nominal	1800	1800	1800	1800	
Flute spannability per ASTM E 661	2-5/8"	5"	8"	10"	
Permeance, perms, per ASTM E 96	30	26	26	24	
R Value per ASTM C 518	0.2	0.3	0.5	0.6	
Coefficient of thermal expansion, inches/inch • °F, per ASTM E 831	8.0 x 10 ⁻⁶				
Linear variation with change in moisture, inches/inch • %RH, per ASTM D 1037	8.0 x 10 ⁻⁶				
Water absorption, % max, per ASTM C 473	10	10	10	10	
Surface water absorption, nominal grams, per ASTM C 473	1.6	1.6	1.6	1.6	
Mold resistance per ASTM D 3273*	10	10	10	10	
Bending Radius	25'	25'	25'	30'	
Bending Radius	25'	25'	25'	30'	

^{*}ASTMD3273 Mold Resistance Testing - In independent lab tests conducted on Securock Gypsum-Fiber roof board and Securock Glass-Mat roof board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

Submittal Approvals:

Job Name

Contractor Date

Product Information

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

Trademarks

The following trademarks used herein are owned by United States Gypsum Company or a related company: Securock, USG, USG in stylized letters.

Note

Products described here may not be available in all

geographic markets. Consult your U.S. Gypsum Company sales office or representative for information.

Notice

We shall not be liable for 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 their intended 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 and industrial hygiene practices during

handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.

Securock[®] Glass-Mat Roof Board



High-performance glass-mat roof board for use in low-slope commercial roofing systems

- Ideal for use as cover board in single-ply mechanically attached systems
- Moisture and mold resistant core and facer
- Provides protection to roof system from hail and foot traffic
- Fire resistant for use as fire barrier and thermal barrier
- Unmatched mat-to-core tensile bond strength makes facer less likely to delaminate when cutting.
- High-quality tight mat makes for easier handling and cutting.

Description

Securock® Glass-Mat roof board is a high-performance roof board for use in low-slope commercial roofing systems. It enhances the durability of the entire roofing system when used as cover board in single-ply mechanically attached systems. Its specially treated core and high-performance glass-mat facer provide protection against fire, mold and moisture.

Advantages

Fire Performance Meets Factory Mutual (FM) Class 1 and Underwriters Laboratories (UL) Class A fire ratings for unlimited slope in fire barrier applications per UL 790.

Easier to cut, handle and install High-quality mat produces less itchiness than competitive products. **Moisture and Mold** Fiberglass face and back with treated core provides moisture and mold resistance. Scored a maximum "10" for mold resistance on ASTM D3273.

Limitations

- Securock Glass-Mat roof board is engineered to perform within a properly designed roof system. The use
 of Securock Glass-Mat roof board as a roofing component is the responsibility of the design professional.
- Consult roofing manufacturers for specific instructions on the application of their products to Securock Glass-Mat roof board.
- Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse
 effects on the performance of the roof system and are beyond the control of USG.
- Keep Securock Glass-Mat roof board panels dry before, during and after installation. Securock Glass-Mat roof board should not be installed during rains, heavy fogs and any other conditions that deposit moisture on the surface of the board. Apply only as much Securock Glass-Mat roof board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.
- For re-roof or re-cover applications, existing roofing system must be dry throughout prior to application of Securock Glass-Mat roof board.
- Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
- Securock Glass-Mat roof board should be stored flat and off the ground with protection from the weather.
 If stored outdoors, a breathable waterproof covering should be used.
- For systems not listed, please contact your local USG Securock roofing sales representative.

Installation

- Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the Securock Glass-Mat roof board, flush with the surface. Fasteners should be installed in strict compliance with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. Proper fastener spacing is essential to achieve wind-uplift performance.
- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of Securock Glass-Mat
 roof board. Butt board edges and ends loosely in typical installations. Long, uninterrupted runs (greater than
 200 feet) of Securock Glass-Mat roof board may require slight gapping due to thermal expansion.
- See product data table for maximum flute span when panels are applied directly over metal decking.
- For vertical parapet applications, only 1/2" or 5/8" panels should be used. Maximum framing spacing is 24" o.c.



Performance

- UL Classified as to Surface Burning Characteristics and Non-Combustibility in accordance with ASTM E84 & E136 (CAN/ULC-S102 & S114).
 - Flame Spread 0 and Smoke Developed 0
 - Non-Combustible Core
- 1/4", 1/2" and 5/8" Thickness Class A unlimited slope in accordance with UL790 (CAN/ULC-S107).
- 5/8" Thickness Meets requirements of Type X per ASTM C1177 and may be used in P series designs as a thermal barrier.

System Performance

- FM Approved
 - Complies with requirements of FM 4450 and FM 4470
 - Meets FM Class 1

Standards Compliance

Securock Glass-Mat roof board is manufactured to conform to ASTM C1177.

Physical Properties

	Securock Glass-Mat Roof Board			
	1/4" (7.4 mm)	1/2" (12.7mm)	5/8" (15.9 mm)	
Width, standard	4' (1220 mm)	4' (1220 mm)	4' (1220 mm)	
Length, standard	8' (2440 mm)	8' (2440 mm)	8' (2440 mm)	
Pieces per unit for 4' x 8' sheet	42	30	30	
Weight, nominal lbs./unit 4' x 8' sheet	1688	1995	2667	
Weight, nominal lbs./sq. ft.	1.2	2.0	2.7	
Flexural strength, parallel, lbs. min. per ASTM C473	40	80	100	
Compressive strength, psi nominal	700-1000	700-1000	700-1000	
Flute spannability per ASTM E661	2-5/8"	5"	8"	
Permeance, perms per ASTM E96	18	18	16	
R Value per ASTM C518	0.36	0.53	0.54	
Coefficient of thermal expansion, inches/inch • °F, per ASTM E831	8.5 x 10 ⁻⁶	8.5 x 10 ⁻⁶	8.5 x 10 ⁻⁶	
Linear variation with change in moisture, inches/inch • %RH, per ASTM D1037	6.3 x 10 ⁻⁶	6.3 x 10 ⁻⁶	6.3 x 10 ⁻⁶	
Water absorption, % max, per ASTM C473	10	10	10	
Mold resistance per ASTM D3273*	10	10	10	
Bending Radius	4'	6'	9'	

*ASTM D3273 Mold Resistance Testing - In independent lab tests conducted on Securock Gypsum-Fiber roof board and Securock Glass-Mat roof board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

Submittal Approvals:

Job Name

Contractor

Date

Product Information

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personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.



Submittal Sheet

SECUROCK® Cement Roof Board



- Ideal for use as a cover board in system applications such as liquid-applied membranes or as a parapet, fire, or thermal barrier roof board
- Lightest cement board in the industry
- Environmentally sustainable product lower weight reduces embodied energy and embodied emissions
- Water-durable, mold-resistant substrate
- Will not rot, warp, delaminate or disintegrate
- Easy to cut and fasten
- Non combustible

Description

Securock® Cement Roof Board is a high performance roof board for use in low-slope roofing systems. As the lightest and easiest to use cement board in the industry, it enhances the entire roofing system as both a cover board and as a parapet, fire, or thermal barrier roof board. As a cover board, Securock Cement Roof Board can be used with a variety of membranes and systems including fully adhered and mechanically attached systems, but it is ideal for applications such as liquid-applied membranes and cold mastic modified bitumen. As a parapet, fire, or thermal barrier roof board, Securock Cement Roof Board has an unlimited slope classification and is non combustible. Because this product is cement based, it provides superior compressive strength, water durability and mold resistance.

Advantages

Exceptional Strength

Engineered to provide superior wind-uplift performance for a wide variety of roof assemblies. Securock Cement Roof Board is formed in a continuous process using an aggregated portland cement slurry with polymer-coated, glass-fiber mesh completely encompassing edges and both surfaces, which enhances bond strength of membrane systems and gives excellent resistance to delamination.

Fire Performance

Meets Factory Mutual (FM) Class 1 and Underwriters Laboratories (UL) Class A fire ratings for unlimited slope in fire barrier applications per UL 790.

Moisture and Mold

Scored a maximum "10" for mold resistance on ASTM D3272 and is highly water durable.

Versatile

Can be used as a component in single-ply, fluid-applied, spray foam, metal and cold applied modified bitumen roofing.

Installation

- A. Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- B. Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the Securock Cement Roof Board, flush with the surface. Fasteners should be installed in strict compliance with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. Proper fastener spacing is essential to achieve wind-uplift performance.
- C. Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of Securock Cement Roof Board. Butt board edges and ends loosely in typical installations. Long, uninterrupted runs (greater than 200 feet) of Securock Cement Roof Board will require slight gapping due to thermal expansion.
- D. See product data table below for maximum flute span when panels are applied directly over metal decking.
- E. For vertical parapet applications maximum stud spacing: 16" o.c., maximum fastener spacing: 8" o.c. for wood and steel framing. Always consult a design professional for actual spacing.
- F. Only use corrosion-resistant fasteners that are compatible with concrete. Approved fasteners include: Durock® tile backer screws for steel framing (or equivalent), 1-1/4" and 1-5/8" for 14- to 20-gauge steel framing; Durock tile backer screws for wood framing (or equivalent), 1-1/4", 1-5/8", and 2-1/4" for wood framing. Nails (1-1/2" hot-dipped galvanized roofing nails).

Limitations

- 1. Securock Cement Roof Board is engineered to perform within a properly designed roof system. The use of Securock Cement Roof Board as a roofing component is the responsibility of the design professional.
- Consult roofing manufacturers for specific instructions on the application of their products to Securock Cement Roof Board.
- 3. Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse effects on the performance of the roof system and are beyond the control of USG.
- 4. Keep Securock Cement Roof Board panels dry before, during and after installation. Securock Cement Roof Board should not be installed during rains, heavy fogs and any other conditions that deposit moisture on the surface of the board. Apply only as much Securock Cement Roof Board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.
- For re-roof or re-cover applications, existing roofing system must be dry throughout prior to application of Securock Cement Roof Board.
- 6. Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.



- 7. Securock Cement Roof Board should be stored flat and off the ground with protection from the weather. Preferred storage location is an enclosed shelter providing protection from the elements; however, if stored outdoors, a breathable waterproof covering should be used.
- 8. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to evaporate to avoid damage to roofing components.
- 9. Consult with the system manufacturer for recommendations on all applications.
- 10. Securock Cement Roof Board is formulated to develop fine micro-cracking (also called as multiple-cracking) in the panel. The micro-cracking process helps to evenly relieve the stored strain energy in the product due to handling and installation, external loads, and/or panel restrained movement. The presence of micro-cracks in the panel should not be considered a product defect.

Fire Performance

- UL Classified as to Surface Burning Characteristics and Noncombustibility in accordance with ASTM E84 & E136 (CAN/ULC-S102 & S114).
 - Flame Spread 0 and Smoke Developed 0
 - Noncombustible
- Class A unlimited slope in accordance with UL790 (CAN/ULC-S107). See the UL Building Materials Directory for more information.

System Performance

- FM Approved
- Complies with requirements of FM 4450 and FM 4470
- Meets FM Class 1

Standards Compliance

Securock Cement Roof Board is manufactured to conform to ASTM C1325, "Standard for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units".

Physical SECUROCK Cement Roof Board Properties

Thickness, nominal	½ in. (12.7 mm)
Width, standard	4 ft. (1220 mm)
Length, standard	8 ft. (2440 mm)
Pieces per unit for 4' x 8' sheets	30
Weight, nominal lbs./unit, 4' x 8' sheet	2375
Weight, nominal lbs./sq. ft.	2.4
Flexural strength, parallel, psi, per ASTM C 947	>750
Compressive strength, psi nominal	>1000
Flute spannability per ASTM E 661	12 in.
Permeance, perms, per ASTM E 96	5.84
R Value, °F.ft².h/Btu, per ASTM C 518	0.39
Coefficient of thermal expansion, inches/inch/°F, per ASTM E 831	4.5 x 10 ⁶
Linear variation with change in moisture, %, per ASTM D 1037	<0.07
Water absorption, % max, per ASTM C 473	<15
Mold resistance, per ASTM D 3273*	10
Minimum Bending Radius	6 ft. (1.83 m)

*ASTMD3273 Mold Resistance Testing - In independent lab tests conducted on Securoox Cement Roof Board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

Product Information

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

Warning

Dust can contain silica. Prolonged and repeated breathing of silica dust can cause lung damage and cancer. If cutting with a power tool, use a wet or vacuum saw to reduce the amount of dust generated. Dust can be corrosive to eyes, skin, and respiratory tract.

Contact can cause severe chemical burns. Wear eye, skin and respiratory protection. If eye contact occurs, flush immediately with water for 30 minutes. If ingested, call physician. Product safety information: 800-507-8899 or usg.com Customer Service: 800 ŬSG-4-YOU (800 874-4968)

KEEP OUT OF REACH OF CHILDREN.

Chicago, IL 60661

Trademarks

Gypsum Company or its related companies: Durock, Securock, USG and USG in stylized letters. Note Products described here may

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not be available in all geographic markets. Consult vour United States Gypsum Company sales office or representative for information.

Notice

We shall not be liable for incidental and 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 intended 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 date it was or reasonably should have been discovered.

Safety First!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read MSDS and literature before specification and installation.



Product Comparison Guide

Securock High-Performance Roof Boards

USG has a full range of high-performance roof board products, giving consumers a choice in the roof board industry.

Securack Gypsum-Fiber roof board outperforms the competition and is made from 95 percent recycled material. Securack Glass-Mat roof board meets the stringent performance requirements and specifications of competitive glass-mat roof boards while being easier to handle. Plus, both boards come with the customer service, flexibility and responsiveness that only USG can deliver. All of this adds up to a roof board portfolio that goes above and beyond the competition.

SECUROCK Glass-Mat Roof Board

Performance	1/4" Securock Glass-Mat	1/4" DENSDECK ¹	1/2" Securock Glass-Mat	1/2" DENSDECK ¹	5/8" Securock Glass-Mat	5/8" DENSDECK ¹
Compressive strength, psi	700-1000	900	700-1000	900	700-1000	900
Flute span	2-5/8"	2-5/8"	5"	5"	8"	8"
Bending radius	4'	5'	6'	8'	9'	12'
Flexural strength, Method B, parallel, lbf. min. per ASTM C473	40	40	80	80	100	100
Permeance, perms	18	50	18	35	16	32
Water absorption, % max, per ASTM C473	10	10	10	10	10	10
Mold resistance per ASTM D3273*	10	N/A ³	10	N/A ³	10	N/A ³
ASTM Standard	C1177	C1177	C1177	C1177	C1177	C1177

Securock Gypsum-Fiber Roof Board

Performance	1/4" Securock Gypsum-Fiber	1/4" DENSDECK Prime ¹	3/8" Securock Gypsum-Fiber	1/2" DENSDECK Prime ¹	1/2" Securock Gypsum-Fiber	5/8" DENSDECK Prime ¹	5/8" Securock Gypsum-Fiber
Compressive strength, psi	1800	900	1800	900	1800	900	1800
Flute span	2-5/8"	2-5/8"	5"	5"	8"	8"	10"
Flexural Strength, Method B, parallel, lbf. min. per ASTM C473	40	40	70	80	110	100	155
Nail pull resistance, min. lbs./ft.	80	40 ²	110	80 ²	120	90 ²	145
Permeance, perms	30	50	26	35	26	32	24
Water absorption, % max, per ASTM C473	10	10	10	10	10	10	10
Mold resistance per ASTM D3273*	10	N/A ³	10	N/A ³	10	N/A ³	10
ASTM Standard	C1278	C1177	C1278	C1177	C1278	C1177	C1278

^{*}ASTM D3273 Mold Resistance Testing - In independent lab tests conducted on Securock Gypsum-Fiber roof board and Securock Glass-Mat roof board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

A More Economical Product

When compared to DensDeck products, Securock Gypsum-Fiber roof board has better compressive strength and flute spannability. Testing confirms that you can substitute a 3/8" Securock Gypsum-Fiber panel for other 1/2" products and still achieve superior performance.

psi	ı	ı	1	ı
0	450	900	1350	1800
				1800
		900		
Inches				
1	2	3	4	5
				5
				5
	Ö	0 450	900	900 1350



Easier Handling and Installation

Securock Glass-Mat roof board has a high quality glass-mat, making it less itchy and easier to work with. The high mat-to-core tensile bond strength also makes mat less likely to delaminate when cutting.

Securock Gypsum-Fiber roof board, with its homogenous composition of gypsum and cellulose fibers, does not require a glass-mat facer for strength. This makes the panel easy to handle with no itchiness.

Securock Gypsum-Fiber roof board is ideal for fully adhered applications. It achieves high bond strength without the use of an additional primer. It also has very low surface absorption, giving additional installed cost savings on labor and materials.

Best Choice for All Apllications

Securock high-performance roof boards go above and beyond to meet your needs for all applications.

Applications	SECUROCK Gypsum-Fiber Roof Board	Securock Glass-Mat Roof Board
Single ply mechanically attached	Acceptable	Recommended
Single ply fully adhered	Recommended	Not Recommended
Modified Bitumen torch applied	Recommended	Not Recommended
Modified Bitumen cold applied	Recommended	Not Recommended
Modified Bitumen hot mopped	Recommended	Not Recommended
Built up roof	Recommended	Not Recommended
Built up roof hybrid	Recommended	Not Recommended
Self adhered	Recommended	Not Recommended
Spray foam	Recommended	Not Recommended
Thermal barrier	Acceptable	Recommended
Fire barrier	Acceptable	Recommended
Vapor barrier substrate	Acceptable	Recommended

Environmentally Friendly



SCIENTIFIC CERTIFICATION SYSTEMS SCS-MC-01185

Securock Gypsum-Fiber roof board is the ideal choice for projects where high recycled content is a priority. It is manufactured from a combination of synthetic gypsum and cellulose fibers. Synthetic gypsum is a byproduct from electrical plants. It is indistinguishable from natural mined gypsum rock in performance and quality, and its use in Securock Gypsum-Fiber roof board eliminates landfill waste. Likewise, the cellulose fibers are waste that are sourced locally from a packaging manufacturer. The final result is a high-performance roof board with over 95 percent recycled content, earning it Green Cross certification from Scientific Certification Systems.

- ¹ Georgia-Pacific DensDeck data taken from GP Lit. Item # 622602
- ² Minimum per ASTM C1177, Georgia Pacific DensDeck data not provided in Lit. Item #622602
- ³ Georgia-Pacific DensDeck data not provided in Lit. Item #622602

Product Information

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

Products described here may not be available in all geographic markets. Consult your United States Gypsum Company sales office or representative for information.

Trademarks

The following trademarks used herein are owned by United

States Gypsum Company or a related company: Securock, USG, USG in stylized letters. DensDeck, DensDeck Prime, and DensDeck DunaGuard are registered trademarks of G-P Corporation. LEED is a registered trademark of U.S. Green Building Council.

Notice

We shall not be liable for incidental and 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 intended 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 date it was or reasonably should have been discovered.

Safety First!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.



Project Profile



Securock® Hits It Out of the Park for Marlins Stadium

Application/Building Type:

Stadium Retractable Roof

Project Name:

Florida Marlins Ballpark

Location:

Miami, Florida

Contractor:

Petersen Dean Roofing and Solar Systems, Inc.

Featured Products:

Securock® Gypsum-Fiber Roof Board



usg.com/securock

"Securock Gypsum-Fiber roof board... far exceeded the building's performance requirements. The products came out on top. No one else could meet both the wind uplift and Class A fire test requirements,"

With an eye on performance, aesthetics, sustainable design and the fan experience, Miami-Dade County and the Florida Marlins plan to have their bases covered when their new ballpark opens for the 2012 season.

Performance expectations are high – literally – for the new Marlins Ballpark, especially when it comes to the stadium's retractable roof. Consisting of three metal-decked operable panels, the lower east and west panels cover the stands while the highest elevated center panel rises 200 feet over second base to allow for pop flies.

That elevation puts the roof in one of the area's highest wind zones, requiring the assembly to withstand 140-mile-per-hour winds. The roof system includes 18- and 20-gauge metal steel decking with 11-foot joist spacing. Carlisle HP-H Polyiso insulation board, 2.0" thick, and 5/8" Securock® Gypsum-Fiber roof board were mechanically fastened to the decking. A 60-mil Carlisle Sure-Weld® TPO membrane was then fully adhered to the Securock Gypsum-Fiber roof board.

"The building's elevation, design and the owner's plans for a Factory Mutual Global insured property, combined with the stringent Dade County and UL Class A building criteria, all drove the wind uplift design pressure," said Dave Wikel, vice president of Petersen Dean Roofing and Solar Systems, Inc., the park's roofing contractor. "There are very high uplift requirements with this application, yet at the time drawings were prepared, there wasn't a system yet approved in Dade County to meet the stadium's requirements."

That changed when United States Gypsum Company and Carlisle SynTec stepped up to bat to perform extensive testing for a Securock roof board and Carlisle membrane assembly.

"Securock Gypsum-Fiber roof board and Carlisle far exceeded the building's performance requirements. The products came out on top. No one else could meet both the wind uplift and Class A fire test requirements," said Bernie Abrami, manufacturer's representative with ProRep, for Securock and Carlisle. "The superior compressive strength of Securock also resists membrane puncture from flying debris during south Florida's severe weather."

Securock Gypsum-Fiber roof board is fire resistant and ideal for use in all types of commercial low-slope roofing systems. The board is engineered to provide superior wind-uplift performance for a wide variety of roof assemblies. Its fiber-reinforced, homogenous composition gives the panel strength and water resistance through to the core.

"We didn't have any problems with blistering or bubbling that we do with other cover boards," Wikel noted. "It was easy to contour if we had inconsistencies in the deck substrate. And, because a single-ply membrane fully adheres to the smooth board surface, you get a nice looking, uniform and clean finished product. The owner not only demanded a high performance system, but also one that was pleasing to the eye."





"We feel appreciated by USG and Securock," Wikel said. "We get great support that we don't get with other providers." Sustainable design was another project priority. The Marlins Ballpark plans to become the first LEED® Silver—certified retractable-roof baseball stadium. Green design initiatives include a goal that ultimately more than 20 percent of the project's total material will come from recycled content.

Securock Gypsum-Fiber roof board is made from 95 percent recycled materials and has earned independent certification from Scientific Certification Systems for this achievement.

A Double Play: Fan and Contractor Comfort

The ballpark's retractable roof will provide relief from south Florida's almost daily summer rains and high heat with average summer temperatures of 87 °F, weather conditions that have made a demanding project even more so for the contractors installing the roof.

"It's hot and sweaty. The guys are tied up on cable for fall protection. Anything that makes moving materials easier and more efficient is a big benefit for comfort, safety and production," Abrami said.

That was the experience the crew from Petersen Dean, the nation's third largest roofing contractor, had as they installed Securock. Because the gypsum-fiber roof board's composition of gypsum and cellulose fibers does not require a glass-mat facer for strength, the panel is easy to handle with no itchiness.

"We like it because it's user-friendly. The ease of working with Securock allowed us to install the board in a timely manner in a very difficult application where the sides and end of the roof are at a steep vertical slope of 18/12. Some of the roof panels are straight up and down," Wikel explained.

Another benefit project team members cited was the gypsum-fiber board's low surface absorption, which increases the ability to predict adhesive usage and find additional material cost savings.

Petersen Dean has installed approximately two million square feet of Securock roof board in projects in Florida and Puerto Rico during the past year.

"We feel appreciated by USG and Securock," Wikel said. "We get great support that we don't get with other providers. The quality of the material and service is what makes Securock our preferred roof board."

The new Marlins Ballpark is owned by Miami-Dade County. Architect Earl Santee of POPULOUS is one of the most experienced ballpark architects in the world, working on nearly 20 Major League Baseball parks.

CASE STUDY





Apartment complex under construction in South Jordan, Utah

New Construction Using New Roofing Products in Utah

by Rich Willett, USG product manager

Despite a slowly recovering economy, construction of new apartment complexes continues in Utah. Western National Contractors, Irvine, Calif., is in the process of building the first phase of "The Daybreak Apartments" in South Jordan, Utah, just outside of Salt Lake City. When completed, a multitude of new families in the area's westward expansion will call the project home. The first phase has more than 185,000-sq.ft. of roof area covering eight apartment buildings with 320 new luxury apartments, a clubhouse, and numerous support buildings.

Noorda Architectural Metals, Salt Lake City, Utah, is the roofing contractor on the project. Chris Noorda, owner of the company, and Aaron Howe, who manages the roofing division, together selected the complex's roofing system and chose a GAF Materials Corporation's mechanically attached 60 mil TPO membrane over USG Corporation's new 1/4" Securock glass-mat roof board. "We needed a total roof system that could stand up to our cold winters and hot summers, and we wanted to work with manufacturers who have proven track records to give the owner the best possible value for his money," Noorda explained.

Noorda Architectural is a GAF Master Select Contractor and has installed many thousands of square feet of GAF's TPO roof membrane. Additionally Noorda recently installed 3/8" Securock gypsum-fiber roof board on a LEED project called "Art Space Commons." The gypsum-fiber roof board's 95% recycled content helped support the environmental goals of MJSA Architecture, Salt Lake City, Utah, the architect for Art Space Commons. "We knew that USG was going to produce a roof board with glassmat facer and we were eager to try the new board based on our experience with the quality and service the company has always provided us," Howe added.

Working with Jim Sheltmire and Paul Schnieders of D7 Weather Protection System, Park City, Utah, representatives for GAF and USG roofing products in Utah, Howe was able to secure the initial production run of the new glass-mat roof board for the Daybreak project which arrived just in time to start the roofing work. "We were excited to work with Noorda and that Daybreak Apartments was the first project for our new glass-mat roof board," said Sid Teachey, USG Securock national sales manager.

Given this project's wood framed construction, a fire barrier was required. Securock glass-mat roof board meets Factory Mutual (FM) class 1 and Underwriters Laboratories (UL) Class A fire ratings for unlimited slope in fire barrier applications per

UL 790 making it a perfect match for the project requirements.

The glass-mat roof board is ideal for use in low-slope commercial roofing systems. In addition to providing fire protection, building professionals can enhance the durability of the entire roofing system when they use the glass-mat roof board as a cover board in single-ply mechanically attached systems. Also, with its specially treated core and high-performance glass-mat facer, the product is moisture and mold resistant scoring a ten, the highest score for mold resistance on ASTM D3273.

"Our workmen are very pleased with the way the board handles and the ease of cutting," said Howe. "We are satisfied with the performance qualities of the product. The way it works in the hands of the men installing it is paramount to us."

So next time you fly in to Salt Lake City International Airport keep an eye to the west valley and when you see that huge apartment complex with the gleaming white Energy Star roof, know that it is protected for many years to come through the combined efforts of Noorda Architectural Metals, USG Corporation, and GAF Material Corporation. The first phase of Daybreak Apartments is expected to open soon.

Roof Board Applications

There are four basic components in a low-slope commercial roof assembly:

- A structural deck and joists, which can be formed of steel, wood or concrete
- Insulation, including polyisocyanurate (ISO), extruded polystyrene (XPS) or expanded polystyrene (EPS)
- Roof cover board installed between the insulation and the roofing membrane to protect the insulation and support the membrane, improving fire protection, traffic and hail resistance, and wind uplift performance
- A membrane or membrane system, which can be built-up roofing (BUR), single-ply or modified bitumen

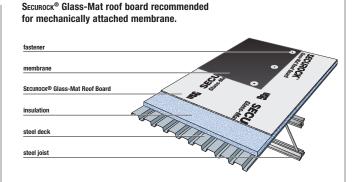
The following are for illustration purposes only. Securock® High-Performance roof boards are engineered to perform within a properly designed roof system. The use of Securock High-Performance roof boards as a roofing component is the responsibility of the design professional. Consult roofing manufacturers for specific instructions on the application of their products to Securock High-Performance roof boards.

Cover Board

Securock[®] Gypsum-Fiber roof board

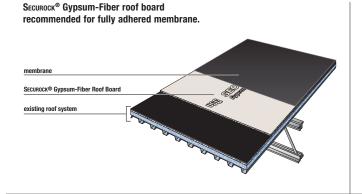
Secureock High-Performance roof board is placed directly below the roofing membrane, providing primary support for the membrane and protecting the underlying insulation layer from damage during installation and for the service life of the roof. Cover boards are used for impact protection for insulation boards (foot traffic, hail, etc.), to protect insulation from EPDM heat transfer, as a surface to which asphalt can be mopped, and as a fire barrier for external fire.

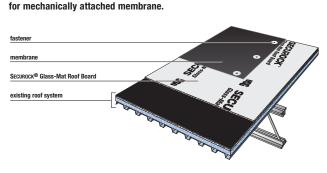
membrane SECUROCK® Gypsum-Fiber Roof Board insulation steel deck steel joist



Roof Recover Board

Secureock High-Performance roof board is placed over the existing membrane surface, where it functions as a separator and a support layer between the old roof and the new roofing membrane. Roof recover boards provide a flat substrate for new roofs and have all of the benefits of a cover board.





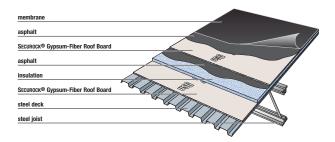
Securock® Glass-Mat roof board recommended



Hot Asphalt Substrate (Hot Mop)

Securook® Gypsum-Fiber roof board can be mechanically fastened, bonded with mastic or adhesives or hot mopped to foam insulation. All hot-applied roofing systems can then be mopped directly onto the unprimed roof board without concern for blistering or delamination. Securook Gypsum-Fiber is your best option for hot mopping.

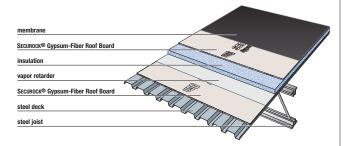
Securock® Gypsum-Fiber roof board only.



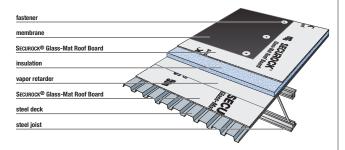
Substrate for Vapor Retarders

Secureock High-Performance roof board is placed over the roof deck to provide support for the vapor barrier. The membrane may be loose laid; attached with cold mastics, hot asphalt or adhesives; or mechanically fastened, depending on the roof assembly. The roof board is used as a substrate for retarder to adhere to in order to reduce condensation.

Securock® Gypsum-Fiber roof board recommended for fully adhered membrane.



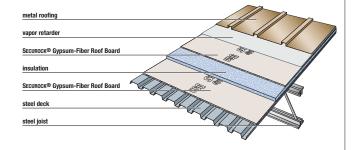
Securock® Glass-Mat roof board recommended for mechanically attached membrane.



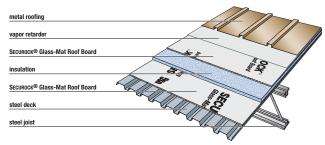
Metal or Tile Roof Thermal Barrier

Secureock High-Performance roof board provides a thermal barrier in conjunction with a standing-seam metal or tile roofing system. It also provides noise reduction and hail resistance. Thermal barriers reduce thermal "shock" and slow heat escape from building and act as a fire barrier for internal fire.

Securock® Gypsum-Fiber roof board recommended for fully adhered membrane.



Securock® Glass-Mat roof board recommended for mechanically attached membrane.

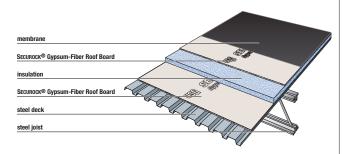




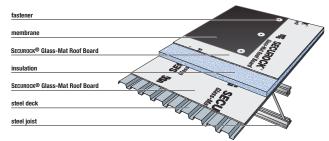
Thermal Barrier

Securnock High-Performance roof board provides a thermal barrier installed directly to metal deck for both expanded and extruded polystyrene insulation. Thermal barriers reduce thermal "shock" and slow heat escape from building and act as a fire barrier for internal fire.

Securock® Gypsum-Fiber roof board recommended for fully adhered membrane.



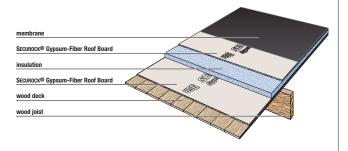
Securock® Glass-Mat roof board recommended for mechanically attached membrane.



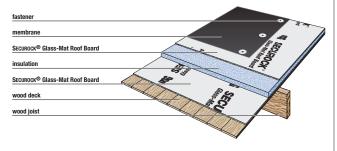
Fire Barrier Underlayment

Securock High-Performance roof board is used as a barrier board underlayment below optional rigid foam insulation on a combustible deck to achieve a Class A, B or C fire-resistance rating. See the UL Building Materials Directory for more information.

Securock® Gypsum-Fiber roof board recommended for fully adhered membrane.



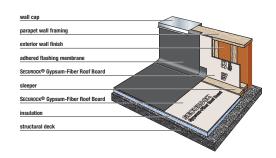
Securock® Glass-Mat roof board recommended for mechanically attached membrane.



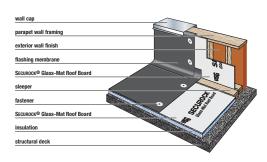
Parapet Wall Substrate

Securook High-Performance roof board is fastened to wood or metal framing along the parapet wall for roofing membrane flashing support.

Securock® Gypsum-Fiber roof board recommended for fully adhered membrane.



Securock® Glass-Mat roof board recommended for mechanically attached membrane.





Chicago, IL 60661

CONTACT US

Customer Service 800 621.9523

Technical Service 800 USG.4Y0U

Samples, Literature and Product Information

CEU: Discover a Better System with Roof Boards

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See us on Pinterest:

SAMPLES AND LITERATURE INFORMATION

Securock Roof Boards Samples and Literature

Description	Form #	Commodity Code
SECUROCK Gypsum-Fiber Roof Board 1/4" sample	RF2A	051155
Securock Gypsum-Fiber Roof Board 3/8" sample	RF2B	051156
Securock Gypsum-Fiber Roof Board 1/2" sample	RF2C	051157
SECUROCK Gypsum-Fiber Roof Board 5/8" sample	RF2D	051158
Securock Glass-Mat Roof Board 1/4" sample	RF29A	051162
SECUROCK Glass-Mat Roof Board 1/2" sample	RF29B	051163
SECUROCK Glass-Mat Roof Board 5/8" sample	RF29C	051164
SECUROCK Cement Roof Board 1/2" sample	RF50	
SECUROCK Gypsum-Fiber Roof Board Submittal Sheet	RF5	430200
SECUROCK Glass-Mat Roof Board Submittal Sheet	RF32	438163
SECUROCK Cement Roof Board Submittal Sheet	RF51	
SECURDOCK High-Performance Roof Boards - Product Comparison Guide	RF3	430198
SECUROCK Gypsum-Fiber Roof Board Tip Sheet	RF18	900118
SECURDOCK Roof Boards Literature Brochure	RF39	438271
SECURDOCK High-Performance Roof Boards - Product Binder	RF16	900074
SECUROCK Gypsum-Fiber Roof Board Installation DVD - English/Spanish	RF21	437957
SECUROCK High-Performance Roof Boards - Fastener Patterns	RF41	438335
SECUROCK High-Performance Roof Boards - Architectural Specifications	RF43	438336
SECUROCK High-Performance Roof Boards - Applications	RF44	438337