



DEXcell Roof Board Products

Technical Guide

DEXcell: One Name for Every Application

Need roof board options and technical expertise? We've got you covered.

Four Outstanding Products

The DEXcell® Roof Board product line covers the entire spectrum of commercial roofing applications. When a building houses expensive equipment or expensive people, DEXcell Roof Boards will cover more than your roof.

- **DEXcell® Glass Mat Roof Board** is recommended for mechanically attached systems, metal roof systems and wood shake underlayment. It's also an excellent thermal and fire barrier.
- **DEXcell FA® Glass Mat Roof Board** has a heavy-duty coated fiberglass facer and is ideal for fully adhered roof systems – from a vapor barrier substrate to the parapet wall.
- **DEXcell FA VSH® Glass Mat Roof Board** has a reinforced gypsum panel with enhanced moisture resistant core and a heavy-duty coated fiberglass facer. It is extremely durable and approved for use in single-ply and multi-ply assemblies meeting FM Very Severe Hail (VSH) Classification.
- **DEXcell® Cement Roof Board** provides customers with unprecedented versatility. This board's superior moisture resistance makes it suitable for nearly every roof system.

Look Closer at the Best Roof Board Products

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1/2" DEXcell FA Glass Mat Roof Board (FM) APPROVED

DEXcell

FA Glass Mat Roof Board

Choose the Best DEXcell® Product for Your Project

| Application | DEXcell® Glass Mat Roof Board | DEXcell FA® Glass Mat Roof Board | DEXcell FA VSH® Glass Mat Roof Board | DEXcell® Cement Roof Board |
|-------------------------------------|-------------------------------|----------------------------------|--------------------------------------|----------------------------|
| Single-Ply – Fully Adhered | — | ☑ | ☑ | ☑ |
| Single-Ply – Mechanically Attached | ☑ | ☑ | ☑ | ☑ |
| Single-Ply – Self Adhered | — | ☑ | ☑ | ☑ |
| Modified Bitumen – Hot Mop | — | ☑ | ☑ | ☑ |
| Modified Bitumen – Cold Adhesive | — | ☑ | ☑ | ☑ |
| Modified Bitumen – Torch | — | ☑ | ☑ | ☑ |
| Modified Bitumen – Self Adhered | — | ☑ | ☑ | ☑ |
| Built-Up Roof (BUR) – Hot Mop | — | — | — | ☑ |
| Built-Up Roof (BUR) – Cold | — | ☑ | ☑ | ☑ |
| Spray Polyurethane Foam | — | ☑ | ☑ | ☑ |
| Fluid Applied | — | ☑ | ☑ | ☑ |
| Thermal Barrier | ☑ | ☑ | ☑ | ☑ |
| Fire Barrier | ☑ | ☑ | ☑ | ☑ |
| Substrate for Vapor Barrier | ☑ | ☑ | ☑ | ☑ |
| Substrate for Parapet Wall | — | ☑ | ☑ | ☑ |
| Very Severe Hail – Modified Bitumen | — | ☑ | ☑ | — |
| Very Severe Hail – Single-Ply | — | — | ☑ | — |
| Vegetative “Green” Roof System | — | ☑ | ☑ | ☑ |
| Photovoltaic Roof System | — | ☑ | ☑ | ☑ |
| Standing-Seam Metal Roof System | ☑ | ☑ | ☑ | ☑ |
| Wood Shake Underlayment | ☑ | ☑ | ☑ | ☑ |

☑ Recommended ☑ Acceptable — Not Recommended*

*Indicates product applications that may be used successfully, but may not be optimal in terms of cost or performance as compared to the recommended product.

Note: In situations where prolonged excessive membrane surface temperatures may be experienced, such as dark-colored membranes in Southern climates, roof surfaces that experience reflected sunlight or photovoltaic installations, DEXcell® Cement Roof Board is the preferred DEXcell® product.

Fire barrier meets FM Class 1 and UL Class A Fire ratings for roofing systems up to unlimited slope per UL 790.

| Product | Cover Board Attachment | | | | Membrane Attachment | | | | | | |
|---------------------------|------------------------|-------------|----------|----------------|---------------------|-------------|-------|---------------------|---------------|---------------|----------------|
| | Loose Lay | Hot Asphalt | Adhesive | Mech. Fastener | Solvent Based | Water Based | Torch | Hot Asphalt | Cold Adhesive | Low-Rise Foam | Mech. Fastener |
| DEXcell® Glass Mat | ☑ ¹ | — | — | ☑ ² | — | — | — | — | — | — | ☑ |
| DEXcell FA® Glass Mat | ☑ ¹ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | Fleece ³ | ☑ | ☑ | ☑ |
| DEXcell FA VSH® Glass Mat | ☑ ¹ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | Fleece ³ | ☑ | ☑ | ☑ |
| DEXcell® Cement Board | ☑ ¹ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

☑ Yes — No

1. Loose lay when layers above are attached to the deck. Common in thermal barrier applications.

2. With MA roof covers. 4 to 5 fasteners per 4x8 are commonly used.

3. Application of fleece back membrane in hot asphalt is permitted.

DEXcell® Glass Mat Roof Board

A Board You'll Get Attached To

DEXcell® Glass Mat Roof Board has coated fiberglass facers and an enhanced mold-resistant gypsum core. This moisture- and mold-resistant gypsum panel is a substrate board, thermal barrier and/or coverboard for commercial roofing applications. It scores and cuts easily, and is specially coated on the front, back and sides for easy handling.

Use it for a wide variety of roofing systems, including mechanically attached and ballasted single-ply membranes, thermal barriers and metal roofing.

DEXcell® Glass Mat Roof Board is manufactured by Gold Bond Building Products, LLC.



ADVANTAGES

- Scores and snaps easily.
- Fiberglass mat on face and back has special coating for easy handling.
- Meets ASTM C1177.
- Meets FM Class 1 and UL Class A fire ratings for roofing systems up to unlimited slope per UL 790/ULC S107.
- Approved component in specific UL fire-rated designs.
- Use it as part of a class A, B or C roof covering that has been tested in accordance with UL 1256, ULC CAN-S126 or FM 4450. No additional thermal barrier is required as per IBC 2603.4.1.5.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- High-density coverboard/thermal barrier.
- 5/8" (15.9 mm) DEXcell Glass Mat Roof Board is UL Classified for use in numerous hourly rated UL assemblies, including UL "P" roof assemblies; refer to *UL Certifications Directory*: ul.com. Meets Type X per ASTM C1177.
- Product achieves UL GREENGUARD Certification for low chemical emissions. For more information, visit: ul.com/gg.

APPLICATIONS

- Use DEXcell Glass Mat Roof Board as a substrate board and for thermal protection in roofing assemblies. It provides increased fire safety and acoustical enhancement. It also serves as a substrate for a vapor retarder and/or continuous substrate for the application of roofing membranes. This board provides increased moisture, mold and impact resistance.
- Use it as a coverboard in roofing assemblies. DEXcell Glass Mat Roof Board protects and supports the roof membrane; provides increased fire-, moisture- and mold-resistance and reduces the potential for penetration damage to the membrane.

SIZES

| Thickness | Width x Length |
|----------------|-------------------------------|
| 1/4" (6.4 mm) | 4' x 8' (1,219 mm x 2,438 mm) |
| 1/2" (12.7 mm) | 4' x 8' (1,219 mm x 2,438 mm) |
| 5/8" (15.9 mm) | 4' x 8' (1,219 mm x 2,438 mm) |



DEXcell®
Glass Mat Roof Board

DEXcell® Glass Mat Roof Board

TECHNICAL DATA

| Physical Properties | 1/4" DEXcell Glass Mat | 1/2" DEXcell Glass Mat | 5/8" DEXcell Glass Mat |
|---|--|---|---|
| Thickness ¹ , Nominal | 1/4" (6.4 mm) | 1/2" (12.7 mm) | 5/8" (15.9 mm) |
| Width ¹ , Nominal | 4' (1,219 mm) | 4' (1,219 mm) | 4' (1,219 mm) |
| Length ^{1,4} , Standard | 8' (2,438 mm) | 8' (2,438 mm) | 8' (2,438 mm) |
| Weight, Nominal | 1.2 lbs. / sq. ft. (5.9 k/m ²) | 2.0 lbs./sq. ft. (10 k/m ²) | 2.5 lbs./sq. ft. (12 k/m ²) |
| Edges ¹ | Square | Square | Square |
| Flexural Strength ¹ , Parallel | ≥ 40 lbf. (178 N) | ≥ 80 lbf. (356 N) | ≥ 100 lbf. (445 N) |
| Bending Radius | 4' (1,219 mm) | 6' (1,829 mm) | 8' (2,438 mm) |
| Thermal Resistance ⁴ | R = .23 | R = .43 | R = .5 |
| Permeance ⁵ | 25 perms | 24 perms | 23 perms |
| Water Absorption ¹ (% of Weight) | ≤ 10% | ≤ 10% | ≤ 10% |
| Surfacing | Coated Fiberglass | Coated Fiberglass | Coated Fiberglass |
| Flute Spanability ⁶ | 2-5/8" (66.7 mm) | 5" (127 mm) | 8" (203 mm) |
| Compressive Strength ⁷ | 900 psi | 900 psi | 900 psi |
| Mold Resistance ⁸ | Score of 10 | Score of 10 | Score of 10 |
| Product Standard Compliance | ASTM C1177 | ASTM C1177 | ASTM C1177 |

Fire-Resistance Characteristics

| | | | |
|--|----------------------------|----------------------------|----------------------------|
| Core Type | Regular | Regular | Type X |
| UL Type Designation | DEXcell | DEXcell | FSW-6 |
| Combustibility ² | Non-combustible | Non-combustible | Non-combustible |
| Surface Burning Characteristics ³ | Class A | Class A | Class A |
| Flame Spread ³ | 0 | 0 | 0 |
| Smoke Development ³ | 0 | 0 | 0 |
| Fire Classification | UL Classified, FM Approved | UL Classified, FM Approved | UL Classified, FM Approved |

Applicable Standards and References

ASTM C473 *Standard Test Methods for Physical Testing of Gypsum Panel Products*

ASTM C518 *Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus*

ASTM C1177 *Standard Test Method for Glass Mat Gypsum Substrate for Use as Sheathing*

ASTM D3273 *Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber*

ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*

ASTM E96 *Standard Test Methods for Water Vapor Transmission of Materials*

ASTM E119 *Standard Test Methods for Fire Tests of Building Construction and Materials.*

ASTM E136 *Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C*

ASTM E661 *Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads*

Gypsum Association, GA-238, *Guidelines for Prevention of Mold Growth on Gypsum Board*

Gold Bond Building Products, LLC Manufacturer Standards, *NGC Construction Guide*

1. Specified values per ASTM C1177, tested in accordance with ASTM C473.
2. Tested in accordance with ASTM E136.
3. Tested in accordance with ASTM E84.
4. Tested in accordance with ASTM C518.
5. Tested in accordance with ASTM E96.
6. Tested in accordance with ASTM E661.
7. Tested in accordance with ASTM C473.
8. Tested in accordance with ASTM D3273 and rated in accordance with ASTM D3274.



DEXcell® Glass Mat Roof Board

PRODUCT COMPARISON

| Performance | 1/4" DEXcell® Glass Mat | 1/4" Securock® Glass Mat ¹ | 1/4" DensDeck® Glass Mat ² | 1/2" DEXcell® Glass Mat | 1/2" Securock® Glass Mat ¹ | 1/2" DensDeck® Glass Mat ² | 5/8" DEXcell® Glass Mat | 5/8" Securock® Glass Mat ¹ | 5/8" DensDeck® Glass Mat ² |
|---|-------------------------|---------------------------------------|---------------------------------------|-------------------------|---------------------------------------|---------------------------------------|-------------------------|---------------------------------------|---------------------------------------|
| Flexural Strength, parallel, lbf. min. per ASTM C473 Method B | ≥40 | 40 | ≥40 | ≥80 | 80 | ≥80 | ≥100 | 100 | ≥100 |
| Flute Span | 2-5/8" | 2-5/8" | 2-5/8" | 5" | 5" | 5" | 8" | 8" | 8" |
| Permeance, perms | 25 | 18 | >50 | 24 | 18 | >35 | 23 | 16 | >32 |
| Water Absorption, % max. per ASTM C473 | <10 | 10 | <10 | <10 | 10 | <10 | <10 | 10 | <10 |
| Compressive Strength, psi | 900 | 700-1000 | 900 | 900 | 700-1000 | 900 | 900 | 700-1000 | 900 |
| Bending Radius | 4' | 4' | 5' | 6' | 6' | 8' | 8' | 9' | 12' |
| Mold Resistance per ASTM D3273 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| ASTM Standard | C1177 | C1177 | C1177 | C1177 | C1177 | C1177 | C1177 | C1177 | C1177 |

1. USG Securock® data taken from USG literature, Form# RF32/rev. 9-23 2. Georgia-Pacific data taken from GP literature, Item #622602 - 4/21



DEXcell FA® Glass Mat Roof Board

A Board You'll Want To Adhere To

DEXcell FA® Glass Mat Roof Board has heavy-duty coated fiberglass facers and an enhanced mold-resistant gypsum core. This moisture- and mold-resistant gypsum panel is a substrate board, thermal barrier and/or coverboard for commercial roofing applications. It scores and cuts easily, and is specially coated on the front, back and sides for easy handling.

Use it for a wide variety of roofing systems, including fully adhered, mechanically attached and ballasted roofs using single-ply membranes, modified bitumen, fluid-applied, built-up roofing, spray foam and metal.

DEXcell FA® Glass Mat Roof Board is manufactured by Gold Bond Building Products, LLC.



ADVANTAGES

- Scores and snaps easily.
- Fiberglass mat on face and back has special coating for easy handling.
- Meets ASTM C1177.
- Meets FM Class 1 and UL Class A fire ratings for roofing systems up to unlimited slope per UL 790/ULC S107.
- Approved component in specific UL fire-rated designs.
- Use it as part of a class A, B or C roof covering that has been tested in accordance with UL 1256, ULC CAN-S126 or FM 4450. No additional thermal barrier is required as per IBC 2603.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- Eliminates the need for a field-applied primer for many fully adhered roofing membrane applications. Please see system manufacturers' application recommendations.
- High-density coverboard/thermal barrier.
- 5/8" (15.9 mm) DEXcell FA Glass Mat Roof Board is UL Classified for use in numerous hourly rated UL assemblies, including UL "P" roof assemblies; refer to *UL Certifications Directory*: ul.com. Meets Type X per ASTM C1177.



APPLICATIONS

- Use DEXcell FA Glass Mat Roof Board as a substrate board and for thermal protection in roofing assemblies. It provides increased fire safety and acoustical enhancement. It also serves as a substrate for a vapor retarder and/or continuous substrate for the application of roofing membranes. This board provides increased moisture and mold resistance.
- Use it as an insulation coverboard in roofing assemblies. DEXcell FA Glass Mat Roof Board protects and supports the roof membrane; provides increased fire, moisture and mold resistance; and reduces the potential for penetration damage to the membrane.
- Use it to sheathe the roof side of parapet and penthouse walls.

SIZES

| Thickness | Width x Length |
|----------------|-------------------------------|
| 1/4" (6.4 mm) | 4' x 4' (1,219 mm x 1,219 mm) |
| | 4' x 8' (1,219 mm x 2,438 mm) |
| 1/2" (12.7 mm) | 4' x 4' (1,219 mm x 1,219 mm) |
| | 4' x 8' (1,219 mm x 2,438 mm) |
| 5/8" (15.9 mm) | 4' x 4' (1,219 mm x 1,219 mm) |
| | 4' x 8' (1,219 mm x 2,438 mm) |



DEXcell FA® Glass Mat Roof Board

TECHNICAL DATA

| Physical Properties | 1/4" DEXcell FA Glass Mat | 1/2" DEXcell FA Glass Mat | 5/8" DEXcell FA Glass Mat |
|---|--|---|---|
| Thickness ¹ , Nominal | 1/4" (6.4 mm) | 1/2" (12.7 mm) | 5/8" (15.9 mm) |
| Width ¹ , Nominal | 4' (1,219 mm) | 4' (1,219 mm) | 4' (1,219 mm) |
| Length ¹ , Standard | 4' (1,219 mm), 8' (2,438 mm) | 4' (1,219 mm), 8' (2,438 mm) | 4' (1,219 mm), 8' (2,438 mm) |
| Weight, Nominal | 1.2 lbs. / sq. ft. (5.9 k/m ²) | 2.0 lbs./sq. ft. (10 k/m ²) | 2.5 lbs./sq. ft. (12 k/m ²) |
| Edges ¹ | Square | Square | Square |
| Flexural Strength ¹ , Parallel | ≥ 40 lbf. (178 N) | ≥ 80 lbf. (356 N) | ≥ 100 lbf. (445 N) |
| Bending Radius | 4' (1,219 mm) | 6' (1,829 mm) | 8' (2,438 mm) |
| Thermal Resistance ⁴ | R = .23 | R = .43 | R = .5 |
| Permeance ⁵ | 25 perms | 24 perms | 23 perms |
| Water Absorption ¹ (% of Weight) | ≤ 5% | ≤ 5% | ≤ 5% |
| Surface Water Absorption ⁷ | ≤ 1.0 g | ≤ 1.0 g | ≤ 1.0 g |
| Surfacing | Coated Fiberglass | Coated Fiberglass | Coated Fiberglass |
| Flute Spanability ⁶ | 2-5/8" (66.7 mm) | 5" (127 mm) | 8" (203 mm) |
| Compressive Strength ⁷ | 900 psi | 900 psi | 900 psi |
| Mold Resistance ⁸ , ASTM D3273 | Score of 10 | Score of 10 | Score of 10 |
| Product Standard Compliance | ASTM C1177 | ASTM C1177 | ASTM C1177 |

| Fire-Resistance Characteristics | | | |
|--|----------------------------|----------------------------|----------------------------|
| Core Type | Regular | Regular | Type X |
| UL Type Designation | DEXcell | DEXcell | FSW-6 |
| Combustibility ² | Non-combustible | Non-combustible | Non-combustible |
| Surface Burning Characteristics ³ | Class A | Class A | Class A |
| Flame Spread ³ | 0 | 0 | 0 |
| Smoke Development ³ | 0 | 0 | 0 |
| Fire Classification | UL Classified, FM Approved | UL Classified, FM Approved | UL Classified, FM Approved |

Applicable Standards and References

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|--|
| ASTM C473 <i>Standard Test Methods for Physical Testing of Gypsum Panel Products</i> |
| ASTM C518 <i>Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus</i> |
| ASTM C1177 <i>Standard Test Method for Glass Mat Gypsum Substrate for Use as Sheathing</i> |
| ASTM D3273 <i>Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber</i> |
| ASTM E84 <i>Standard Test Method for Surface Burning Characteristics of Building Materials</i> |
| ASTM E96 <i>Standard Test Methods for Water Vapor Transmission of Materials</i> |
| ASTM E119 <i>Standard Test Methods for Fire Tests of Building Construction and Materials.</i> |
| ASTM E136 <i>Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C</i> |
| ASTM E661 <i>Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads</i> |
| Gypsum Association, GA-238, <i>Guidelines for Prevention of Mold Growth on Gypsum Board</i> |
| Gold Bond Building Products, LLC Manufacturer Standards, <i>NGC Construction Guide</i> |

1. Specified values per ASTM C1177, tested in accordance with ASTM C473.
2. Tested in accordance with ASTM E136.
3. Tested in accordance with ASTM E84.
4. Tested in accordance with ASTM C518.
5. Tested in accordance with ASTM E96.
6. Tested in accordance with ASTM E661.
7. Tested in accordance with ASTM C473.
8. Tested in accordance with ASTM D3273 and rated in accordance with ASTM D3274.



PRODUCT COMPARISON

| Performance | 1/4" DEXcell® FA Glass Mat | 1/4" Securock® Gyp.-Fiber ¹ | 1/4" DensDeck® Prime ² | 1/2" DEXcell® FA Glass Mat | 1/2" Securock® Gyp.-Fiber ¹ | 1/2" DensDeck® Prime ² | 5/8" DEXcell® FA Glass Mat | 5/8" Securock® Gyp.-Fiber ¹ | 5/8" DensDeck® Prime ² |
|---|----------------------------|--|-----------------------------------|----------------------------|--|-----------------------------------|----------------------------|--|-----------------------------------|
| Flexural Strength, parallel, lbf. min. per ASTM C473 Method B | ≥40 | 40 | ≥40 | ≥80 | 110 | ≥80 | ≥100 | 161 | ≥100 |
| Flute Span | 2-5/8" | 2-5/8" | 2-5/8" | 5" | 8" | 5" | 8" | 10" | 8" |
| Permeance, perms | 25 | 30 | >30 | 24 | 26 | >23 | 23 | 24 | >17 |
| Water Absorption, % max. per ASTM C473 | ≤5 | 10 | 5 | ≤5 | 10 | 5 | ≤5 | 10 | 5 |
| Compressive Strength, psi | 900 | 1800 | 900 | 900 | 1800 | 900 | 900 | 1800 | 900 |
| Bending Radius | 4' | 25' | 4' | 6' | 25' | 6' | 8' | 30' | 8' |
| Mold Resistance per ASTM D3273 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| ASTM Standard | C1177 | C1278 | C1177 | C1177 | C1278 | C1177 | C1177 | C1278 | C1177 |

1. USG Securock® data taken from USG literature, Form #RF5-USA-ENG/rev. 3-24
 2. Georgia-Pacific data taken from GP literature, Item #622602 - 4/21



DEXcell
 FA Glass Mat Roof Board

DEXcell FA VSH® Glass Mat Roof Board

A Board to Handle the Extremes

DEXcell FA VSH® Glass Mat Roof Board is a reinforced gypsum panel with an enhanced moisture resistant gypsum core and heavy duty coated glass mat facers. It is an excellent choice for applications requiring maximum hail and puncture resistance. It is extremely durable and approved for use in adhered and mechanically attached single-ply and multi-ply assemblies meeting FM Very Severe Hail Classification.

The pre-coated facers sealed surface technology is designed to increase the coverage of membrane adhesives and enhance the performance of the bond strength of the system. The DEXcell FA VSH Roof Boards help reduce the amount of adhesive used and may eliminate the need for a field primer. Consult the system manufacturer for actual priming requirements.

This moisture- and mold-resistant gypsum panel is a substrate board, thermal barrier and/or coverboard for commercial roofing applications. Use it in a wide variety of roofing systems, including fully adhered, modified bitumen, fluid applied, spray foam and metal roofs.



DEXcell FA VSH® Glass Mat Roof Board is manufactured by Gold Bond Building Products, LLC.

ADVANTAGES

- Scores and snaps easily.
- Fiberglass mat on face and back has special coating for easy handling.
- Meets ASTM C1177.
- Meets FM Class 1 and UL Class A fire ratings for roofing systems up to unlimited slope per UL 790/ULC S107.
- Approved component in specific UL fire-rated designs.
- Use it as part of a class A, B or C roof covering that has been tested in accordance with UL 1256, ULC CAN-S126 or FM 4450. No additional thermal barrier is required as per IBC 2603.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- Eliminates the need for a field-applied primer for many fully adhered roofing membrane applications.

- High-density coverboard/thermal barrier.
- Pre-coated facers seal the surface allowing improved adhesive coverage and bond.

APPLICATIONS

- Use DEXcell FA VSH Glass Mat Roof Board as a substrate board and for thermal protection in roofing assemblies. It provides increased fire safety and acoustical enhancement. It also serves as a substrate for a vapor retarder and/or continuous substrate for the application of roofing membranes. This board provides increased moisture, mold and impact resistance.
- Use it as an insulation coverboard in roofing assemblies. DEXcell FA VSH Glass Mat Roof Board protects and supports the roof membrane; provides increased hail resistance, fire, moisture and mold resistance; and reduces the potential for penetration damage to the membrane.
- Use it to sheathe the roof side of parapet and penthouse walls
- Use in adhered and mechanically attached single-ply and multi-ply assemblies.

SIZES

| Thickness | Width x Length |
|----------------|-------------------------------|
| 5/8" (15.9 mm) | 4' x 4' (1,219 mm x 1,219 mm) |
| | 4' x 8' (1,219 mm x 2,438 mm) |



DEXcell
FA VSH Glass Mat Roof Board

DEXcell FA VSH® Glass Mat Roof Board

TECHNICAL DATA

| Physical Properties | 5/8" DEXcell FA VSH Glass Mat |
|---|---|
| Thickness ¹ , Nominal | 5/8" (15.9 mm) |
| Width ¹ , Nominal | 4' (1,219 mm) |
| Length ¹ , Standard | 4' (1,219 mm), 8' (2,438 mm) |
| Weight, Nominal | 2.9 lbs. / sq. ft. (14 k/m ²) |
| Edges ¹ | Square |
| Flexural Strength ¹ , Parallel | ≥ 100 lbf. (445 N) |
| Bending Radius | 8' (2,438 mm) |
| Thermal Resistance ⁴ | R = .5 |
| Permeance ⁵ | 23 perms |
| Water Absorption ¹ (% of Weight) | ≤ 5% |
| Surface Water Absorption | ≤1.0 g |
| Surfacing | Coated Fiberglass |
| Flute Spanability ⁶ | 8" (203 mm) |
| Compressive Strength ⁷ | 900 psi |
| Mold Resistance ⁸ , ASTM D3273 | Score of 10 |
| Product Standard Compliance | ASTM C1177 |

| Fire-Resistance Characteristics | |
|--|----------------------------|
| Core Type | Type X |
| UL Type Designation | FSW-6 |
| Combustibility ² | Non-combustible |
| Surface Burning Characteristics ³ | Class A |
| Flame Spread ³ | 0 |
| Smoke Development ³ | 0 |
| Fire Classification | UL Classified, FM Approved |

| Applicable Standards and References |
|--|
| ASTM C473 <i>Standard Test Methods for Physical Testing of Gypsum Panel Products</i> |
| ASTM C518 <i>Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus</i> |
| ASTM C1177 <i>Standard Test Method for Glass Mat Gypsum Substrate for Use as Sheathing</i> |
| ASTM D3273 <i>Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber</i> |
| ASTM E84 <i>Standard Test Method for Surface Burning Characteristics of Building Materials</i> |
| ASTM E96 <i>Standard Test Methods for Water Vapor Transmission of Materials</i> |
| ASTM E119 <i>Standard Test Methods for Fire Tests of Building Construction and Materials.</i> |
| ASTM E136 <i>Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C</i> |
| ASTM E661 <i>Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads</i> |
| Gypsum Association, GA-238, <i>Guidelines for Prevention of Mold Growth on Gypsum Board</i> |
| Gold Bond Building Products, LLC Manufacturer Standards, <i>NGC Construction Guide</i> |

1. Specified values per ASTM C1177, tested in accordance with ASTM C473.
2. Tested in accordance with ASTM E136.
3. Tested in accordance with ASTM E84.
4. Tested in accordance with ASTM C518.
5. Tested in accordance with ASTM E96.
6. Tested in accordance with ASTM E661.
7. Tested in accordance with ASTM C473.
8. Tested in accordance with ASTM D3273 and rated in accordance with ASTM D3274.



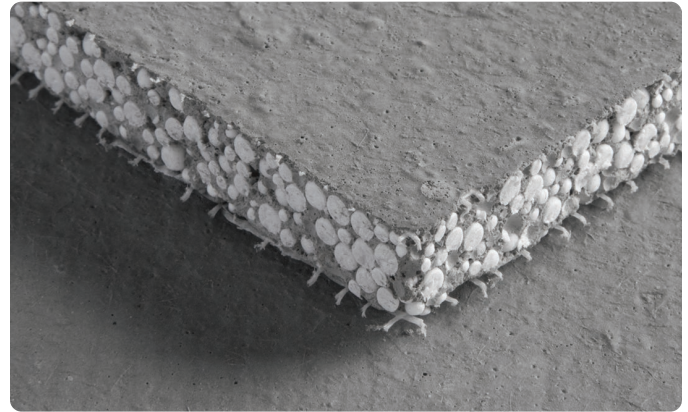
DEXcell® Cement Roof Board

A Board To Get, Wherever It's Wet

DEXcell® Cement Roof Board is a lightweight, moisture- and mold-resistant panel that provides an exceptionally hard, durable surface that withstands prolonged exposure to moisture. Its composition of Portland cement and lightweight aggregate with heavy-duty fiberglass-mesh facers makes it an excellent fire and thermal barrier. This moisture- and mold-resistant cement panel is a substrate board, thermal barrier and coverboard for commercial roofing applications.

Use it for a wide variety of roofing systems, including fully adhered, mechanically attached and ballasted roofs using single-ply membranes, modified bitumen, fluid-applied, built-up roofing, spray foam and metal.

DEXcell® Cement Roof Board is manufactured by PermaBASE Building Products, LLC.



ADVANTAGES

- Excellent bond/pull-through/uplift values.
- Impact resistant, extremely durable and dimensionally stable.
- High compressive strength.
- Lightweight, cementitious core.
- Superior moisture resistance.
- Exceptional freeze/thaw resistance.
- Scores and snaps easily.
- Meets ASTM C1325.
- Meets UL Class 1 and UL Class A fire ratings for roofing systems up to unlimited slope per UL 790 and ULC CAN-S107.
- Use in accordance with a rated system, and DEXcell Cement Roof Board provides a thermal barrier meeting IBC Section 2603.
- Resists the growth of mold per ASTM D3273 with a score of 10, the best possible score.
- Product achieves UL GREENGUARD Certification for low chemical emissions. For more information, visit: ul.com/gg.

APPLICATIONS

- Use it as a coverboard in roofing assemblies. DEXcell Cement Roof Board protects and supports the roof membrane; provides increased fire, moisture and mold resistance; and reduces the potential for penetration damage to the membrane.
- Use it to sheath the roof side of parapet and penthouse walls. Ideal for green roofs and photovoltaic systems.



SIZES

| Thickness | Width x Length |
|------------------------|--------------------------------------|
| 7/16" (11.1 mm) | 4' x 4' (1,219 mm x 1,219 mm) |
| | 4' x 8' (1,219 mm x 2,438 mm) |
| 5/8" (15.9 mm) | 4' x 4' (1,219 mm x 1,219 mm) |
| | 4' x 8' (1,219 mm x 2,438 mm) |

DEXcell®
Cement Roof Board

TECHNICAL DATA

| Physical Properties | 7/16" DEXcell® Cement Roof Board | 5/8" DEXcell® Cement Roof Board |
|--|---|---|
| Thickness ¹ , Nominal | 7/16" (11.1 mm) | 5/8" (15.9 mm) |
| Width ¹ , Nominal | 4' (1,219 mm) | 4' (1,219 mm) |
| Length ¹ , Standard | 4' (1,219 mm), 8' (2,438 mm) | 4' (1,219 mm), 8' (2,438 mm) |
| Weight, Nominal | 2.1 lbs. / sq. ft. (10.3 k/m ²) | 3.0 lbs./sq. ft. (14.7 k/m ²) |
| Edges ¹ | Squared | Squared |
| Flexural Strength ⁶ | ≥ 750 psi | ≥ 750 psi |
| Bending Radius | 5' (1,524 mm) | 5' (1,524 mm) |
| Thermal Resistance ³ | R = .28 | R = .40 |
| Permeance ⁴ | > 5 perms | > 5 perms |
| Water Absorption ¹⁰ (% of Weight) | < 10% | < 10% |
| Linear Variation with Change Moisture ⁷ | ≤ 0.07% | ≤ 0.07% |
| Flute Spanability ⁵ | 12" (305 mm) | 12" (305 mm) |
| Compressive Strength ¹⁰ | 1,250 psi | 1,250 psi |
| Mold Resistance ⁸ (ASTM D3273) | Score of 10 | Score of 10 |
| Mold Resistance ⁹ (ASTM G21) | Score of 0 | Score of 0 |
| Product Standard Compliance | ASTM C1325 | ASTM C1325 |

| Fire-Resistance Characteristics | | |
|--|----------------------------|----------------------------|
| Core Type | N/A | N/A |
| UL Type Designation | DEXcell Cement Roof Board | DEXcell Cement Roof Board |
| Surface Burning Characteristics ² | Class A | Class A |
| Flame Spread ² | 0 | 0 |
| Smoke Development ² | 0 | 0 |
| Fire Classification | UL Classified, FM Approved | UL Classified, FM Approved |

Applicable Standards and References

| |
|--|
| ASTM C473 <i>Standard Test Methods for Physical Testing of Gypsum Panel Products</i> |
| ASTM C518 <i>Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus</i> |
| ASTM C947 <i>Standard Test Method for Flexural Properties of Thin-Section Glass-Fiber-Reinforced Concrete (Using Simple Beam with Third-Point Loading)</i> |
| ASTM C1325 <i>Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units</i> |
| ASTM D1037 <i>Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials</i> |
| ASTM D2394 <i>Standard Test Methods for Simulated Service Testing of Wood and Wood-Base Finish Flooring</i> |
| ASTM D3273 <i>Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber</i> |
| ASTM E84 <i>Standard Test Method for Surface Burning Characteristics of Building Materials</i> |
| ASTM E96 <i>Standard Test Methods for Water Vapor Transmission of Materials</i> |
| ASTM E661 <i>Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads</i> |
| ASTM G21 <i>Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi</i> |
| PermaBASE Building Products, LLC Manufacturer Standards, <i>NGC Construction Guide</i> |

1. Specified minimum values per ASTM C1325, tested in accordance with ASTM C473.
2. Tested in accordance with ASTM E84.
3. Tested in accordance with ASTM C518.
4. Tested in accordance with ASTM E96.
5. Tested in accordance with ASTM E661.
6. Specified minimum values per ASTM C1325, tested in accordance with ASTM C947.
7. Specified minimum values per ASTM C1325, tested in accordance with ASTM D1037.
8. Tested in accordance with ASTM D3273.
9. Tested in accordance with ASTM G21.
10. Tested in accordance with ASTM C473.



DEXcell® Cement Roof Board

PRODUCT COMPARISON

| Performance | 7/16" DEXcell® Cement Roof Board | 1/2" Securock® Cement Roof Board ¹ | 5/8" DEXcell® Cement Roof Board | 5/8" Securock® Cement Roof Board ¹ |
|---|----------------------------------|---|---------------------------------|---|
| Flexural Strength, parallel, lbf. min. per ASTM C473 Method B | ≥750 | >750 | ≥750 | >480 |
| Permeance, perms | >5 | 5.84 | >5 | 5.84 |
| Water Absorption, % max, per ASTM C473 | <10 | <15 | <10 | <15 |
| Compressive Strength, psi | 1250 | >1000 | 1250 | >1250 |
| Bending Radius | 5' | 6' | 5' | 6' |
| Mold Resistance per ASTM D3273 | 10 | 10 | 10 | 10 |
| ASTM Standard | C1325 | C1325 | C1325 | C1325 |

1. USG Securock® data taken from USG literature, Form #RF39/rev. 12-20



Technical Information

FIRE-RESISTANCE RATINGS

Fire and sound ratings for building systems utilizing glass mat gypsum roof boards are dependent on the thickness of the roof board, its application in conjunction with other roof assembly parts, and the manner in which the assembly is installed.

Tests for fire resistance and sound transmission performed by independent laboratories have resulted in specific ratings for roof assemblies.

Fire-resistance ratings represent the results of tests on assemblies made up of specific materials in a specific configuration. When selecting construction designs to meet certain fire-resistance requirements, use caution to ensure that each component of the assembly is the one specified in the test. Further, take precaution that assembly procedures are in accordance with those of the tested assembly. For copies of specific tests, call 1-800-NATIONAL. For fire safety information, see: dexcellroofboard.com.

- DEXcell® Glass Mat Roof Board (minimum ¼") meets UL Class A fire ratings for roofing systems up to unlimited slope per ANSI/UL 790 and ULC CAN-S107; refer to UL Certifications Directory: ul.com.
- DEXcell Glass Mat Roof Board (minimum ¼") is classified in roof deck constructions in accordance with FM 4450, ANSI/UL 1256, ULC CAN-S126 to resist fire from within a building; refer to UL Certifications Directory: ul.com.
- 5/8" (15.9 mm) DEXcell Glass Mat Roof Board is UL Classified for use in numerous hourly rated UL assemblies, including UL "P" roof assemblies; refer to UL Certifications Directory: ul.com. Meets Type X per ASTM C1177.
- DEXcell Glass Mat Roof Board complies with requirements of FM 4450 and FM 4470. Meets FM Class 1.
- DEXcell® Cement Roof Board meets UL Class A fire ratings for roofing systems up to unlimited slope per UL 790 and ULC CAN-S107; refer to UL Certifications Directory: ul.com.
- DEXcell Cement Roof Board is classified in roof deck constructions in accordance with ANSI/UL 1256; refer to UL Certifications Directory: ul.com.
- DEXcell Cement Roof Board complies with requirements of FM 4450 and FM 4470. Meets FM Class 1.

WIND UPLIFT

DEXcell Cement Roof Boards are included in numerous assemblies evaluated by Factory Mutual Global (FMG) and other independent laboratories for wind-uplift performance. For information concerning such assemblies, visit: roofnav.com, SPRI's directory of roof assemblies, DORA, dora-directory.com or the membrane manufacturer's website.

Refer to the roof system manufacturer's written instructions, local code requirements, FMG and UL requirements for proper installation techniques.

- Use fasteners or adhesives specified in accordance with system requirements. Install approved fasteners with plates into the DEXcell Cement Roof Board. Install fasteners and adhesives in compliance with the roof system manufacturer's installation recommendations and FMG *Property Loss Prevention Data Sheet 1-29*. Proper fastener spacing or adhesive application is essential to achieve wind-uplift performance.
- Locate board edge joints on, and end joints parallel to, metal deck ribs. Stagger end joints of adjacent lengths of DEXcell® Cement Roof Board. In typical installations, butt board edges and ends loosely.

Design It

DESIGN RECOMMENDATIONS

DEXcell Roof Boards form one component among many components in a properly designed roof assembly. Gold Bond Building Products, LLC, for gypsum DEXcell products, and PermaBASE Building Products, LLC, for cement DEXcell products, do not warrant the design, quality or workmanship of any other components in any roof assembly in which the DEXcell products may be used or of the roof assembly as a whole. Specifically, the manufacturers offer no recommendations regarding the following aspects of a roof assembly:

- The type of roof assembly to use (single-ply, modified bitumen, built-up roof, etc.);
- The specifications of the other components in the roof assembly;
- Whether to use a separator sheet or vapor barrier between DEXcell Roof Boards and any other component of the roof assembly;
- Priming requirements.

However, different DEXcell products are designed for different applications. Refer to the chart on page 15 for recommendations of which DEXcell products are best suited for various applications.

Apply It

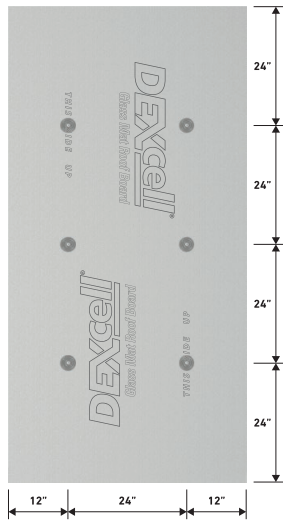
APPLICATION RECOMMENDATIONS

The performance of any DEXcell product may be negatively impacted by excess moisture, heat or pressure. The recommendations and limitations are intended to lower the risk of excess moisture, heat and loads. Failure to observe these recommendations and limitations may void the warranty.

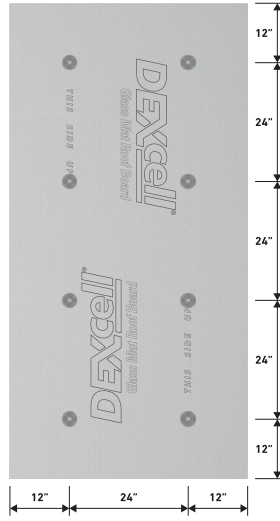
Adhesives and Primers. DEXcell FA Glass Mat Roof Board and DEXcell Cement Roof Board are the preferred products for use in fully adhered roof systems.

Fastener Applications

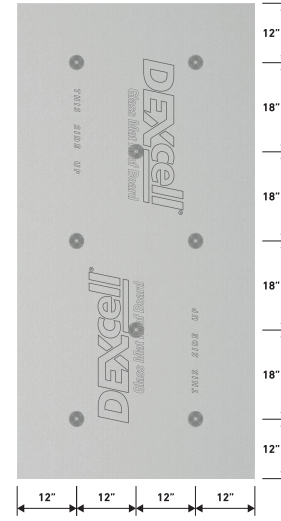
6 Per 4'x8' Sheet



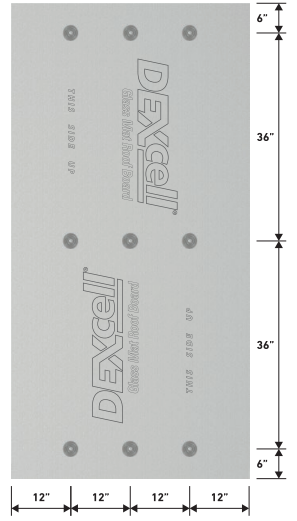
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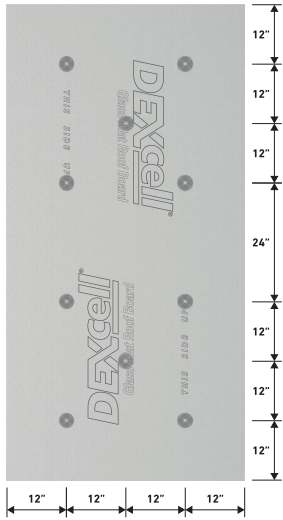
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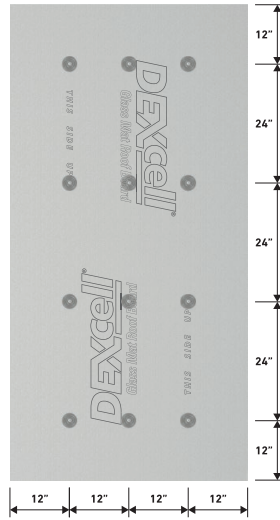
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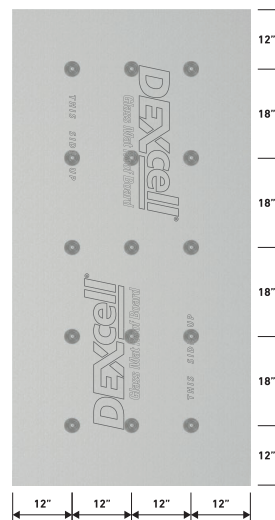
10 Per 4'x8' Sheet



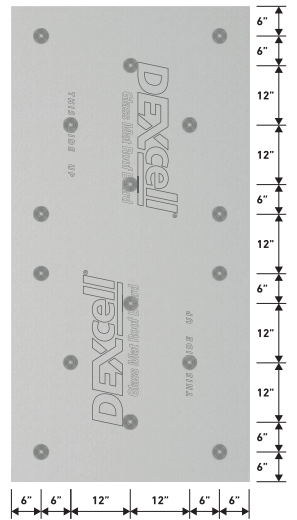
12 Per 4'x8' Sheet



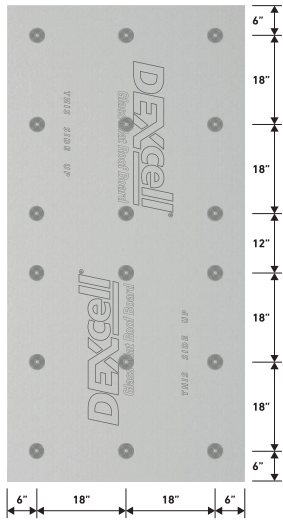
15 Per 4'x8' Sheet



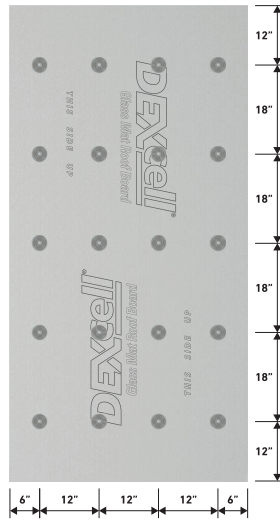
16 Per 4'x8' Sheet



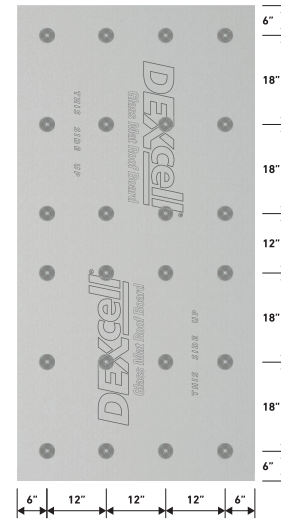
18 Per 4'x8' Sheet



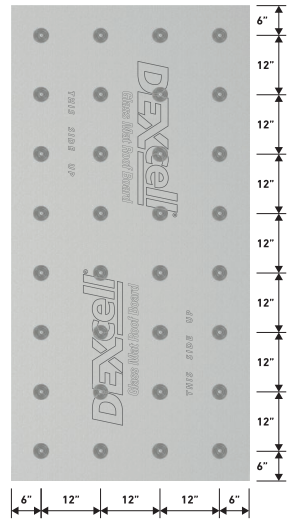
20 Per 4'x8' Sheet



24 Per 4'x8' Sheet



32 Per 4'x8' Sheet



ADHERED MEMBRANE ATTACHMENT

Solvent-Based Adhesives and Primers. Use solvent-based adhesives and primers in accordance with the manufacturer's procedures. Installers must allow sufficient time for solvents and primers to evaporate after application to avoid potential damage to the DEXcell products or other components. Excessive use of solvent-based adhesives increases the risk of blisters. For water-based adhesives, follow manufacturer's recommendations. Confirm any priming requirements of DEXcell products with the membrane manufacturer.

Cold Adhesives. Apply cold adhesives uniformly, as necessary, for good bond. Excessive use of cold adhesives increases the risk of blisters.

Torch-Down Roofing. When applying a membrane using a "torchdown" application method, all products must be dry prior to beginning the installation. Use proper torch technique and limit the amount of heat placed on the DEXcell Roof Boards by aiming the torch flame directly at the roof membrane roll and not at the DEXcell Roof Boards. Avoid overheating the membrane or DEXcell product surface. Check with the roof system manufacturer or roof design professional for attachment requirements for each project.

Hot-Mop Applications. DEXcell Cement Roof Board is recommended for hot-mop applications. When hot mopping, follow the manufacturer's recommendations with respect to ambient temperature and humidity, optimal temperature for the asphalt and appropriate handling of the material. For application temperatures in excess of 450°F (232°C) and/or mopping type IV asphalt, ribbon mopping, spot mopping or installing a venting base sheet is recommended.

Flood Mopping. See attachment chart below for proper flood-mopping applications. Flood mopping DEXcell FA Glass Mat Roof Board or DEXcell Glass Mat Roof Board to a substrate and then flood mopping a membrane to the DEXcell product is not recommended. To avoid excess heat and moisture, spot mopping, ribbon mopping, or installing a venting base sheet is recommended.

Always allow time to cool between applications of hot asphalt or torching.

COVERBOARD ATTACHMENT

Loose Laid. DEXcell Roof Boards may be loose laid with no means of attachment to the structural deck in roof systems with ballasted or mechanically fastened covers. When conditions dictate, such as to prevent wind blow-off or damage during installation, the coverboard can be weighed down or tacked in place with a minimal quantity of mechanical fasteners. Board edges and ends should be butted tightly together. On metal deck, edge joints should be located on and parallel to the top flutes. On structural wood decking, edge and end joints should be staggered at least 6" from the wood decking.

Adhered. DEXcell FA, DEXcell FA VSH and DEXcell Cement Boards can be adhered with a variety of materials to substrates below. The recommended coverboard size is 4' x 4' when using this attachment method. Coverboard edge joints are to be continuous. All coverboard edges and ends should be butted tightly together. All coverboard joints should be offset a minimum of 6" from the panel joints below. All surfaces must be free of any debris, dirt, dust, grease, oil, diesel fuel and standing water before application.

DEXcell FA, DEXcell FA VSH and DEXcell Cement Boards attached in asphalt should be installed by a roofing crew fully trained for these applications. The backside of the coverboard is to be set into the asphalt while still pliable. Asphalt should be applied at a nominal rate of 30 lbs./100 ft.² and within ±25°F of the EVT or as specified in the system approval.

DEXcell FA, DEXcell FA VSH and DEXcell Cement Boards can be attached using low-rise foam applied in ribbons or spatter spray. The backside of the coverboard is to be set onto the spray foam before it is tack-free. Walk on or apply pressure by other means to the entire surface of the boards for maximum contact. Follow adhesive manufacturer's guidelines.

Mechanical. DEXcell FA, DEXcell FA VSH and DEXcell Cement Boards may be mechanically attached to the structural decking. Coverboard edge joints are to be continuous. All coverboard edges and ends should be butted tightly together. All coverboard joints should be offset a minimum of 6" from the panel joints below.

Fasteners should never be closer than 6" from the edges of DEXcell coverboard, and should be placed in a pattern to achieve the desired approval. Care must be taken to avoid over-driving or under-driving the fastener and plate assembly. For mechanically attached insulation systems that incorporate a thermal barrier and/or a layer of rigid foam insulation with the DEXcell coverboard, it is possible to attach all layers to the structural decking using a single fastener of sufficient length.

Best Choice for All Applications

| Product | Cover Board Attachment | | | | Membrane Attachment | | | | | | | |
|---------------------------|------------------------|-------------|----------|----------------|---------------------|-------------|-------|---------------------|---------------|---------------|----------------|--|
| | Loose Lay | Hot Asphalt | Adhesive | Mech. Fastener | Solvent Based | Water Based | Torch | Hot Asphalt | Cold Adhesive | Low-Rise Foam | Mech. Fastener | |
| DEXcell® Glass Mat | ☑ ¹ | — | — | ☑ ² | — | — | — | — | — | — | ☑ | |
| DEXcell FA® Glass Mat | ☑ ¹ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | Fleece ³ | ☑ | ☑ | ☑ | |
| DEXcell FA VSH® Glass Mat | ☑ ¹ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | Fleece ³ | ☑ | ☑ | ☑ | |
| DEXcell® Cement Board | ☑ ¹ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | |

☑ Yes — No

1. Loose lay when layers above are attached to the deck. Common in thermal barrier applications.
2. With MA roof covers. 4 to 5 fasteners per 4x8 are commonly used.
3. Application of fleece back membrane in hot asphalt is permitted.

Install It

GENERAL INSTALLATION RECOMMENDATIONS

Gold Bond Building Products, LLC and PermaBASE Building Products, LLC, make no representations or warranties regarding best practices in the design or installation of roof assemblies. Refer to the applicable roof system manufacturer's written instructions, industry best practices, local code requirements and FMG and/or UL requirements for proper installation techniques. In addition to the limitations regarding heat, moisture and loads in the sections above, DEXcell products are subject to the following installation recommendations and limitations:

- Use only mechanical fasteners approved by FMG or UL with DEXcell products and install such fasteners in strict compliance with the roof system manufacturer's installation recommendations and the most current applicable FMG Loss Prevention Data Sheets. Proper fastener spacing is essential to achieve the proper wind-uplift performance.
- Install only as many DEXcell Roof Boards as can be covered by the roof membrane system during the same day. Locate joints parallel to the deck ribs on the ribs of the steel roof deck. See the product data table for maximum flute span when installing panels directly over steel roof decking. Stagger end joints of adjacent lengths of DEXcell Roof Board. In typical installations, butt board edges and

ends loosely. The design authority should calculate the appropriate spacing between roof boards to allow for thermal expansion based on typical post-installation roof temperature and accounting for installation conditions, in each case based on published DEXcell product properties data.

- For vertical parapet applications, use only 1/2" (12.7 mm) or 5/8" (15.9 mm) DEXcell FA Glass Mat Roof Boards or DEXcell Cement Roof Boards. Maximum framing spacing is 24" (610 mm) o.c. for 5/8" (15.9 mm) DEXcell FA Glass Mat Roof Boards and 16" (406 mm) o.c. for both the 1/2" (12.7 mm) DEXcell FA Glass Mat Roof Board and 7/16" (11.1 mm) DEXcell Cement Roof Board.
- Install roof boards in accordance with methods described in the standards and references cited in this document.
- Examine and inspect deck substrate to which roof boards are to be applied. Remedy all defects prior to installation of the roof boards.
- Provide minimum 1/4" (6.4 mm) clearance between boards and adjacent concrete or masonry to minimize wicking of moisture.
- Install fire-rated assemblies in accordance with the details found in the *UL Fire Resistance Directory*: ul.com.
- See Physical Properties chart for maximum flute span when panels are applied directly over metal decking.





Limitations

Avoid Excess Loads. Subjecting any DEXcell product to excessive loads or foot traffic may void the warranty. Take appropriate protective measures to avoid any concentration of weight that may damage or fracture the roof boards. For example, use extra caution when placing steel-wheeled equipment on installed DEXcell Roof Boards or when installing DEXcell Roof Boards on plaza decks.

Avoid Excess Moisture. Keep DEXcell products dry at all times. The presence of moisture on the surface or within the core of any substrate (including DEXcell products) or anywhere in the roof assembly can negatively impact performance by causing blisters to form during torching or hot mopping or by weakening the structural stability of the roof system. This can significantly decrease wind-uplift resistance in the roof system. It is recommended to evaluate the moisture content of DEXcell Roof Boards with a high-quality moisture meter.

Do not apply fully adhered membranes (solvent-based, water-based, cold adhesives, peel and stick, torched, hot mopped) to wet or dampened DEXcell products. All components of a roof assembly must be thoroughly dry prior to installation of the roof membrane. Do not install DEXcell products during rain, heavy fog, or any other conditions that could deposit moisture on the surface of the roof boards.

To reduce the impact of environmental moisture, DEXcell Roof Boards must be covered by the roof system membrane the same day they are installed. Install only as many DEXcell Roof Boards as can be covered by the final roof covering in the same day.

Take appropriate moisture-control measures when installing DEXcell products on a new poured concrete or lightweight concrete roof deck, or when re-roofing over an existing concrete roof deck, in accordance

with recommendations by roof design professionals, roof system manufacturers, and any applicable design or construction code requirements. Thoroughly dry re-roof or re-cover applications prior to installation of DEXcell products.

- DEXcell Roof Boards are engineered to perform within a properly designed roof system. The use of DEXcell Roof Boards as a roofing system component is the responsibility of the design professional.
- Design roof assemblies containing DEXcell Roof Boards to control vapor drive and moisture.
- Although DEXcell Roof Boards are engineered with coated fiberglass facers and high-density gypsum cores, the presence of free moisture can have an adverse effect on product performance and may compromise the installation of additional roofing system components.
- Moisture accumulation may also significantly decrease wind uplift and vertical pull resistance in the system or assembly. DEXcell Roof Boards that contain disproportionate free moisture content may require testing or replacement.
- Do not use panels as a nailing base (they are nonstructural).
- For suitability in specific roofing systems, contact roofing manufacturers on the application of their products to DEXcell Roof Boards.
- Do not expose DEXcell Roof Boards to weather conditions, dew, installation techniques or moisture drive conditions that may have adverse effects on the performance of the roof system.
- Apply only as much DEXcell Roof Boards as can be covered by a watertight roof covering the same day.
- Do not apply DEXcell Roof Boards to wet roofing substrates.

Handling and Project Conditions

- Avoid water exposure during shipping, handling, storage, installation and after installation of roof boards in order to avoid the formation of mold or mildew.
- Remove nonbreathable shipping wrap material upon receiving and storing roof boards.
- Store roof boards off the ground and under cover. Store boards flat. Use sufficient supports extending under the entire length of roof boards to prevent sagging.
- Keep roof boards dry to minimize the potential for mold growth. Take adequate care while transporting, storing, applying and maintaining roof boards.
- Do not apply roof boards with visible signs of moisture damage or mold growth. Do not apply roof boards over other building materials where conditions exist that are favorable to mold growth.

Maintenance Following Application

- Maintain essential elements of a sound weather-tight building envelope, including roofing, joint sealants, penetrations and flashings.
- Take immediate and appropriate remediation measures as soon as water leaks or condensation sources are identified.
- Perform routine cleaning and maintenance operations using methods that prevent leaks and resulting moisture saturation of roof boards.

Storage Recommendations

Keep DEXcell products dry at all times before, during and after the installation of the roof system. Upon receipt by the customer, remove all plastic packaging from the DEXcell Roof Boards immediately. Fully cover the DEXcell Roof Boards with a breathable, waterproof covering. Failure to immediately remove the plastic packaging may result in condensation or moisture being trapped on or in the product and may void the warranty.

Never store DEXcell Roof Board on the ground, and always stack flat. Air must be allowed to circulate around and under the stored bundles of DEXcell Roof Board to avoid build-up of moisture.

Safety – Gypsum

Installers should wear long pants and a long-sleeved, loose-fitting shirt. Use protective gloves and special eye protection (goggles or safety glasses with side shield). Do not use a power saw to cut these products.

Caution: Because this product contains fiberglass, dust and glass fibers may be released during normal handling, which could result in eye or skin irritation or cause difficulty in breathing. Whenever possible, avoid contact with the skin and eyes and avoid breathing dust or fibers that may be released during installation. Consult the SDS for this product, available at goldbondbuilding.com, before use.

For More Information

ARCHITECTURAL SPECIFICATIONS

Gold Bond Building Products CSI MasterFormat® 3-part guide specifications are downloadable as editable Microsoft® Word documents at: dexcellroofboard.com.

LATEST TECHNICAL INFORMATION AND UPDATES

Visit dexcellroofboard.com or call National Gypsum Company Construction Services: 1-800-NATIONAL (628-4662).

Safety – Cement Board

Installers should wear eye protection (goggles or safety glasses with side shield). Do not use a power saw to cut these products. Whenever possible, avoid contact with the skin and eyes and avoid breathing dust or fibers that may be released during installation. Consult the SDS for this product, available at permabase.com, before use.

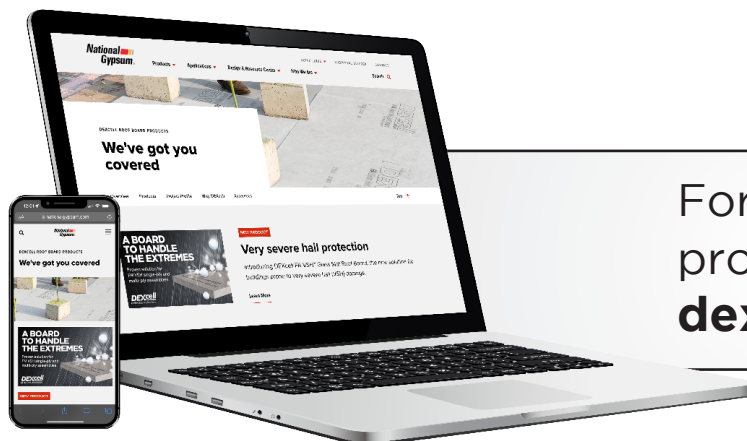
For More Information

ARCHITECTURAL SPECIFICATIONS

PermaBASE Building Products CSI MasterFormat® 3-part guide specifications are downloadable as editable Microsoft® Word documents at: dexcellroofboard.com.

LATEST INFORMATION AND UPDATES

Visit dexcellroofboard.com or call National Gypsum Company Construction Services: 1-800-NATIONAL (628-4662).



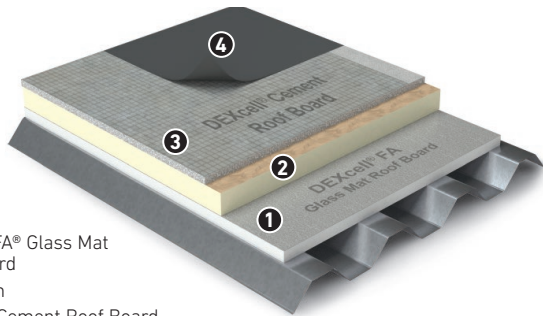
For the latest news and product information visit dexcellroofboard.com.

System Applications

Typical Roof System Applications

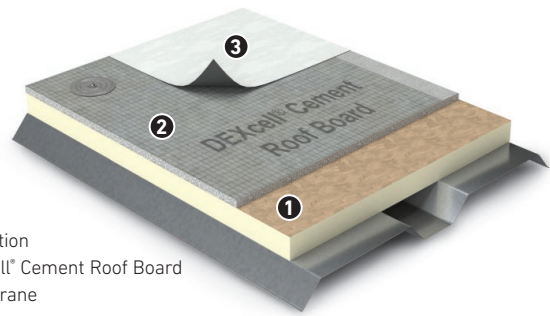
The following are examples of typical roof system applications using DEXcell® Roof Boards and are for illustration purposes only. Consult with the roof system manufacturer or roof design professional for recommendations of use and installation. The manufacturers of DEXcell Roof Board products do NOT provide roof design services and make no warranties or representation with respect to any particular roof system or any components or materials, other than DEXcell® Roof Boards. It is the responsibility of the roof system manufacturer or roof design professional to determine the suitability of DEXcell Roof Boards, or the use of any other materials with DEXcell Roof Boards, for any particular application.

COVERBOARD



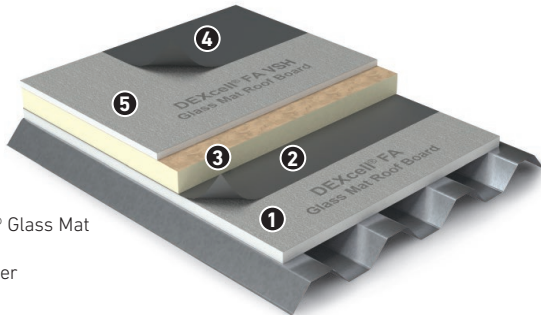
1. DEXcell FA® Glass Mat Roof Board
2. Insulation
3. DEXcell® Cement Roof Board
4. Membrane

COVERBOARD



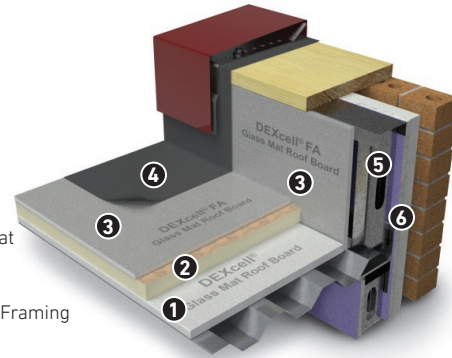
1. Insulation
2. DEXcell® Cement Roof Board
3. Membrane

VERY SEVERE HAIL



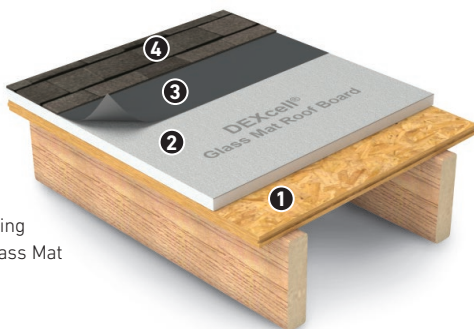
1. DEXcell FA® Glass Mat Roof Board
2. Vapor Barrier
3. Insulation
4. Membrane
5. DEXcell FA VSH® Glass Mat Roof Board

THERMAL BARRIER / VAPOR BARRIER



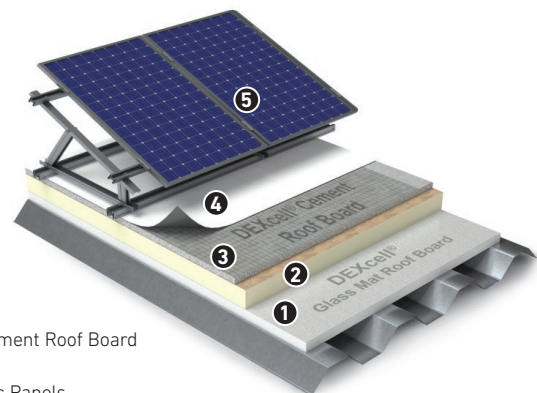
1. DEXcell® Glass Mat Roof Board
2. Insulation
3. DEXcell FA™ Glass Mat Roof Board
4. Membrane
5. Parapet Wall Framing
6. Sheathing

VARIOUS APPLICATIONS



1. Wood Decking
2. DEXcell® Glass Mat Roof Board
3. Membrane
4. Shingles

VARIOUS APPLICATIONS



1. DEXcell® Glass Mat Roof Board
2. Insulation
3. DEXcell® Cement Roof Board
4. Membrane
5. Photovoltaic Panels

Packaging

DEXcell® Glass Mat Roof Board

PACKAGING

| 4' x 8' DEXcell Glass Mat | 1/4" | 1/2" | 5/8" |
|---------------------------|--------|--------|--------|
| Pieces per pallet | 44 | 30 | 30 |
| Sq. ft. per pallet | 1,408 | 960 | 960 |
| Weight per pallet | 1,760 | 2,016 | 2,678 |
| Sq. ft. per truck | 38,020 | 23,040 | 17,280 |
| Weight per truck, lbs. | 47,520 | 48,384 | 48,211 |

NOTE: Any protective plastic factory packaging that is used to wrap DEXcell Roof Boards for shipment is intended to provide temporary protection from exposure to moisture only, and is not intended to provide protection during storage after delivery.

DEXcell Glass Mat Roof Board is manufactured by Gold Bond Building Products, LLC.

DEXcell® Cement Roof Board

PACKAGING

| 4' x 4' DEXcell Cement Roof Board | 7/16" | 5/8" |
|-----------------------------------|--------|--------|
| Pieces per pallet | 30 | 24 |
| Sq. ft. per pallet | 480 | 384 |
| Weight per pallet, lbs. | 1,067 | 1,080 |
| Sq. ft. per truck | 21,600 | 16,128 |
| Weight per truck, lbs. | 48,016 | 48,600 |
| 4' x 8' DEXcell Cement Roof Board | 7/16" | 5/8" |
| Pieces per pallet | 30 | 24 |
| Sq. ft. per pallet | 960 | 768 |
| Weight per pallet, lbs. | 2,110 | 2,130 |
| Sq. ft. per truck | 22,080 | 16,128 |
| Weight per truck, lbs. | 48,531 | 48,990 |

Note: Any protective plastic factory packaging that is used to wrap DEXcell Cement Roof Boards for shipment is intended to provide temporary protection from exposure to moisture only and is not intended to provide protection during storage after delivery.

DEXcell Cement Roof Board is manufactured by PermaBASE Building Products, LLC.

DEXcell FA® Glass Mat Roof Board

PACKAGING

| 4' x 4' DEXcell FA Glass Mat | 1/4" | 1/2" | 5/8" |
|------------------------------|--------|--------|--------|
| Pieces per pallet | 60 | 48 | 44 |
| Sq. ft. per pallet | 960 | 768 | 704 |
| Weight per pallet, lbs. | 1,200 | 1,612 | 1,964 |
| Sq. ft. per truck | 38,400 | 23,040 | 16,900 |
| Weight per truck, lbs. | 48,000 | 48,384 | 47,139 |
| 4' x 8' DEXcell FA Glass Mat | 1/4" | 1/2" | 5/8" |
| Pieces per pallet | 44 | 30 | 30 |
| Sq. ft. per pallet | 1,408 | 960 | 960 |
| Weight per pallet, lbs. | 1,760 | 2,016 | 2,678 |
| Sq. ft. per truck | 38,020 | 23,040 | 17,280 |
| Weight per truck, lbs. | 47,520 | 48,384 | 48,211 |

NOTE: Any protective plastic factory packaging that is used to wrap DEXcell Roof Boards for shipment is intended to provide temporary protection from exposure to moisture only, and is not intended to provide protection during storage after delivery.

DEXcell FA® Glass Mat Roof Board is manufactured by Gold Bond Building Products, LLC.

DEXcell FA VSH® Glass Mat Roof Board

PACKAGING

| 4'x4' DEXcell FA VSH Glass Mat | 5/8" |
|----------------------------------|--------|
| Pieces per pallet | 44 |
| Sq. ft. per pallet | 704 |
| Weight per pallet, lbs. | 2,152 |
| Sq. ft. per truck | 15,488 |
| Weight per truck, lbs. | 47,344 |
| 4' x 8' DEXcell FA VSH Glass Mat | 5/8" |
| Pieces per pallet | 30 |
| Sq. ft. per pallet | 960 |
| Weight per pallet, lbs. | 2,784 |
| Sq. ft. per truck | 16,281 |
| Weight per truck, lbs. | 47,215 |

NOTE: Any protective plastic factory packaging that is used to wrap DEXcell Roof Boards for shipment is intended to provide temporary protection from exposure to moisture only, and is not intended to provide protection during storage after delivery.

DEXcell FA VSH® Glass Mat Roof Board is manufactured by Gold Bond Building Products, LLC.

Acoustics

Architects, roof consultants and contractors have come under increasing pressure to reduce sound transmission through the roof assembly in commercial, residential, institutional and industrial roof assemblies. Sound Transmission Class, or STC, measures how well a building material or assembly blocks airborne sound. STC is a single number rating system. An Outdoor Indoor Transmission Class (OITC) rating is a single number rating for comparing the performance of exterior roofs exposed to typical transportation noise sources.

DEXcell SOUND TESTING

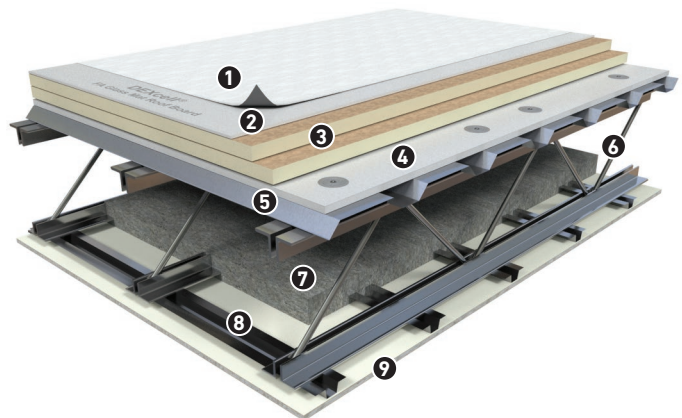
| Interior Ceiling | Above Deck | | | | Below Deck | | | | | |
|----------------------|---------------|------------|--------------|----------|-------------------|-------------|-------------|-------------------|---------------|------------|
| | Under-Layment | Insulation | Coverboard | Membrane | Insulation | Hat Channel | R/C Channel | Suspended Ceiling | Ceiling Board | Tested STC |
| None | 5/8" DEX | 3" ISO | 1/2" DEX | EPDM | - | - | - | - | 1/2" C | 36 |
| 1/2" C, Hat Channel | 5/8" DEX | 3" ISO | 1/2" DEX | EPDM | R13 | Yes | - | - | 1/2" C | 56 |
| 1/2" C, Hat Channel | 5/8" DEX | 3" ISO | 1/2" DEX | ModBit | R13 | Yes | - | - | 1/2" C | 57 |
| 1/2" C, Res. Channel | 5/8" DEX | 3" ISO | 1/2" DEX | EPDM | R13 | Yes | Yes | - | 1/2" C | 57 |
| 1/2" C, Res. Channel | 5/8" DEX | 3" ISO | 1/2" DEX | ModBit | R13 | Yes | Yes | - | 1/2" C | 58 |
| 1/2" C, Res. Channel | 5/8" DEX | 3" ISO | 2 x 1/4" DEX | EPDM | R13 | Yes | Yes | - | 1/2" C | 57 |
| Suspended Ceiling | 5/8" DEX | 3" ISO | 1/2" DEX | EPDM | R13 | - | - | C & Hat C. | 1/2" C | 57 |
| Suspended Ceiling | 5/8" DEX | 3" ISO | 1/2" DEX | EPDM | R13 | - | - | C & Hat C. | 1/2" C (x2) | 59 |
| Suspended Ceiling | 5/8" DEX | 3" ISO | 1/2" DEX | EPDM | 5.5" Mineral Wool | - | - | C & Hat C. | 5/8" X (x2) | 61 |

OPEN JOISTS - STC 36 / OITC 27



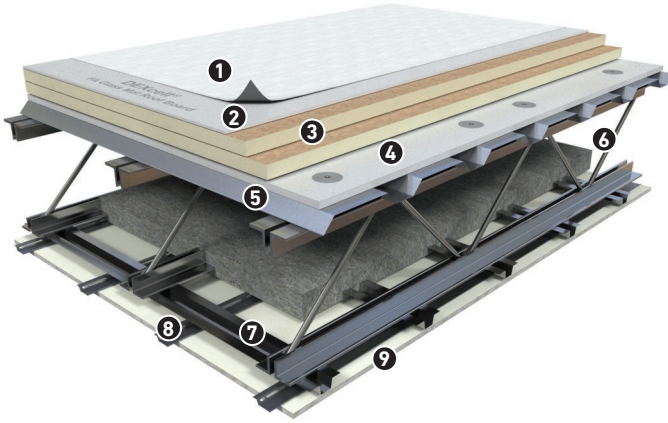
1. Membrane
2. 1/2" DEXcell® (Coverboard)
3. Rigid Foam Insulation, 3" Min.
4. 5/8" DEXcell® Roof Board (Thermal Barrier Underlayment)
5. Steel Deck
6. Steel Truss

HAT CHANNEL - STC 56 / OITC 44



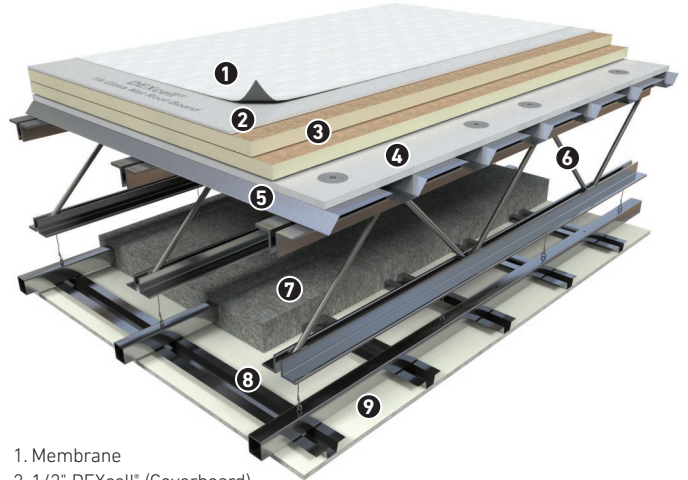
1. Membrane
2. 1/2" DEXcell® (Coverboard)
3. Rigid Foam Insulation, 3" Min.
4. 5/8" DEXcell® Roof Board (Thermal Barrier Underlayment)
5. Steel Deck
6. Steel Truss
7. Fiberglass Batt Insulation, R13
8. Hat Channel
9. Type C Gypsum Board, 1/2" Min.

HAT RC 1 - STC 57 / OITC 46



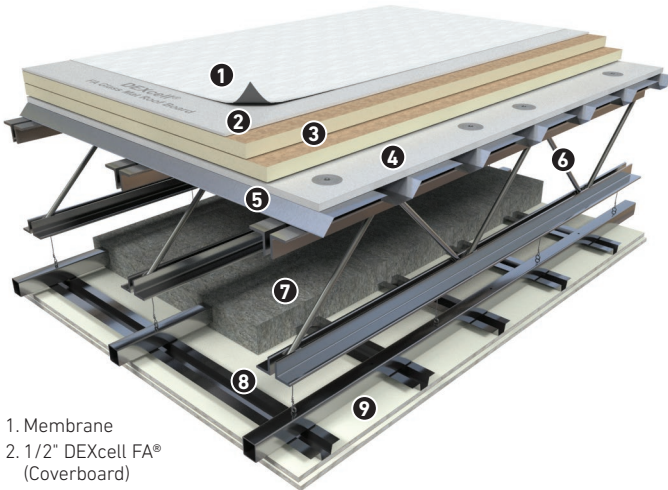
1. Membrane
2. 1/2" DEXcell FA® (Coverboard)
3. Rigid Foam Insulation, 3" Min.
4. 5/8" DEXcell® Roof Board (Thermal Barrier Underlayment)
5. Steel Deck
6. Steel Truss
7. Hat Channel
8. RC Channel
9. Type C Gypsum Board, 1/2" Min.

SUSPENDED CEILING HC 1 - STC 57 / OITC 46



1. Membrane
2. 1/2" DEXcell® (Coverboard)
3. Rigid Foam Insulation, 3" Min.
4. 5/8" DEXcell® Roof Board (Thermal Barrier Underlayment)
5. Steel Deck
6. Steel Truss
7. Fiberglass Batt Insulation
8. Hat Channel
9. Type C Gypsum Board, 1/2" Min.

SUSPENDED CEILING HC 2 - STC 61 / OITC 50



1. Membrane
2. 1/2" DEXcell FA® (Coverboard)
3. Rigid Foam Insulation, 3" Min.
4. 5/8" DEXcell® Roof Board (Thermal Barrier Underlayment)
5. Steel Deck
6. Steel Truss
7. Batt Insulation, 5-1/2" Mineral Wool
8. Hat Channel
9. Two Layers of 5/8" Type X Gypsum Board

DEXcell® Roof Board

(United States, U.S. Territories, and Canada Only)

LIMITED WARRANTY

The Seller warrants to each purchaser of its DEXcell® Roofing Products ("DEXcell"), and to the owner at the time of installation of any building upon which DEXcell is installed, that subject to the conditions and limitations set forth below: (1) DEXcell® Roof Boards shall be free from defects in material and workmanship at the time of shipment ("Defects Warranty"); and (2) with respect to only DEXcell FA® Glass Mat Roof Board (1/2" and 5/8" thicknesses only), and DEXcell® Cement Roof Boards, such products will not deteriorate as a result of exposure to normal weather conditions when properly installed on parapet walls ("Exposure Warranty"). "Seller" means for gypsum DEXcell products, Gold Bond Building Products, LLC, and for cement DEXcell products, PermaBASE Building Products, LLC. Claims under the Defects Warranty may be made for up to two (2) years after the date of the product's manufacture, as printed on each DEXcell Roof Board. Claims under the Exposure Warranty may be made for up to ninety (90) days after the date of installation of the product.

This Limited Warranty is the only warranty applicable to DEXcell and IS IN LIEU OF, EXCLUDES, AND SELLER DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SELLER WILL NOT BE RESPONSIBLE OR LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, EXEMPLARY OR PUNITIVE DAMAGES, REGARDLESS OF THE NATURE OR THEORY OF THE CLAIM, OR FOR LOSS OF INCOME OR PROFITS, DAMAGE TO ANY STRUCTURE, CONTENTS OR OTHER PROPERTY, OR LOSS OF USE. Some states or provinces prohibit the exclusion or limitation of warranties or may not allow the exclusion or limitation of incidental or consequential damages. In this case, the above disclaimers may not apply to you. This warranty gives you specific legal rights and you may also have other rights which will vary depending upon the state or province.

WARRANTY CONDITIONS

This Limited Warranty applies only if the following conditions are met:

- DEXcell Roofing Products shall be dry prior to, during, and after roofing application processes.
- Installation methods are in strict accordance with roofing industry and roof system standards, proper roof design; applicable building codes, and any applicable written recommendations and specifications published by Seller.
- The DEXcell product has been properly handled and stored at all times in accordance with industry, trade, and standard building practices, and has not been abused or used for an improper application.
- Only as much DEXcell as can be covered by complete and final roofing system during the same day has been installed, without leaving the DEXcell product exposed and uncovered.
- The problem with the DEXcell product is not due to structural movement of the building; movement in, failure of or defects in materials to which the product is attached or which are attached to it; causes other than normal weather conditions, such as near gale or higher force winds, tornadoes, hail storms, hurricanes, floods, earthquakes or falling objects; immersion in water, or sustained pooling or cascading of water; or fire, vandalism, misuse or abuse.
- The building on which the product is installed is maintained with reasonable care.
- The problem or claim is not the result of mold, mildew, algae, fungus, or other conditions involving organic growth or bacteria or insect issues.

MAKING CLAIMS

All claims under this warranty must be submitted to National Gypsum Company, authorized sales agent and service provider to Seller, within thirty (30) days from the time you discover a problem with DEXcell products. Include a brief description of the problem with photographs and copies of sales receipts, invoices or other documents which may show the dates of purchase and installation. Mail this information to:

National Gypsum Company
5901 Carnegie Boulevard
Charlotte, NC 28209
Attn: Director, Quality Services R&D

Seller shall within a reasonable time be permitted to inspect the DEXcell products, site, installation and system conditions. The building owner must grant reasonable access for such inspection and shall not make or allow to be made any alteration or repair to DEXcell before Seller's inspection. If Seller's inspection confirms that the DEXcell product does not conform with the warranty set forth herein, then if all conditions are met Seller will, at its sole option, either replace the non-conforming DEXcell or refund the original uninstalled purchase price for the non-conforming DEXcell or, where the product has already been installed, provide reimbursement for the reasonable cost of repair or replacement of the non-conforming DEXcell Roof Board product up to a maximum amount equal to two (2) times the original uninstalled purchase price of the non-conforming DEXcell product. These remedies are Seller's sole and exclusive obligation and liability for any breach of warranty relating to DEXcell.

Issued January 2021



National Gypsum Company

National Gypsum Company is the exclusive service provider of reliable, high-performance building products manufactured by its affiliate companies and marketed under the Gold Bond®, ProForm®, and PermaBASE® brands. The strategic network of Gold Bond, ProForm, and PermaBASE manufacturing facilities located throughout major metropolitan hubs in North America allows us to provide the best in customer service so we can keep your fast-paced projects moving forward.

Sustainability

Our brands create products that contribute to sustainable design by providing healthy indoor air quality; moisture, mold and mildew management; durability; optimal acoustics; life safety and increased space functionality. No matter how you define sustainability, we offer the most comprehensive set of value-added solutions in the industry.

Trusted Partner

The National Gypsum name has been synonymous with high-quality, innovative products and exceptional customer service since 1925. Our technical experts at 1-800-NATIONAL® are always a phone call away to answer any type of product or specification question.

We are Building Products for a Better Future® — one project at a time.

Technical Information

Visit dexcellroofboard.com or call National Gypsum Company Construction Services: 1-800-NATIONAL (628-4662).



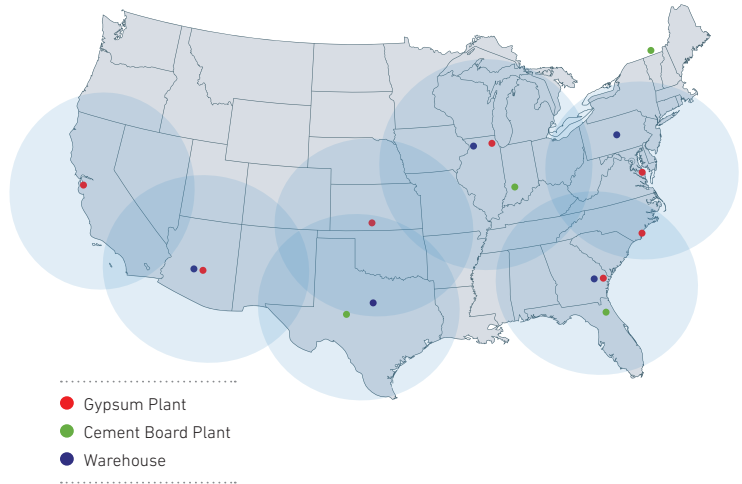
National Gypsum Company is the exclusive service provider for products manufactured by Gold Bond Building Products, LLC and PermaBASE Building Products, LLC.

Delivering Customer Service You Deserve

National Gypsum Company is a solutions-focused organization. Our goal is to help you make the best product choices by providing unmatched technical expertise. You can also expect world-class customer service and a solid commitment to on-time, and in most cases, one-day delivery. Put simply, we want to be your trusted partner.

To the right, you can find the plant locations where DEXcell Roof Board products are produced along with warehouse locations and one-day delivery zones.

DEXcell One-Day Delivery Zones



DEXcell Sales Contact Information

844-339-2355 • DEXcell@nationalgypsum.com

Industry Associations



Exclusive service provider of DEXcell®

DEXcell® gypsum roof board products are manufactured by Gold Bond Building Products, LLC.
DEXcell® cement roof board products are manufactured by PermaBASE Building Products, LLC.



Gold Bond Building Products, LLC
PermaBASE Building Products, LLC
2001 Rexford Road
Charlotte, NC 28211

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