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Gold Bond® BRAND e²XP®

Interior Extreme™ Gypsum Panel

Gold Bond® BRAND Gypsum Board

National Gypsum®

Gold Bond® BRAND e²XP®

Extended Exposure Interior Extreme™

Interior Mold and Moisture Resistance

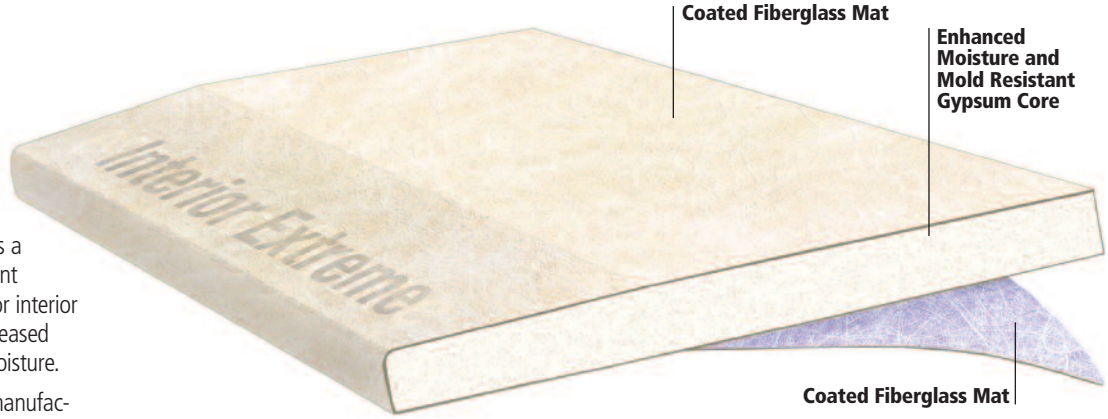
The XP® family of gypsum board products has become the solution of choice among building owners and specifiers who require extra protection against mold and moisture in interior applications. We have established our purple XP brand as the industry standard for superior mold and moisture resistance.

There are many conditions within a construction environment that require mold and moisture resistant properties and XP is the appropriate solution in most. Yet there are certain extreme applications where the limitations of a paper faced product preclude it from being utilized.

Introducing e²XP Interior Extreme Gypsum Panels

National Gypsum has developed Gold Bond® BRAND e²XP® Interior Extreme, a fiberglass faced mold and moisture resistant gypsum panel ideally suited for extreme interior applications. It is the latest addition to National Gypsum's expanding portfolio of e²XP Extended Exposure products.

Gold Bond® BRAND e²XP® Interior Extreme™ Gypsum Panel



Description

e²XP® Interior Extreme™ is a moisture and mold resistant gypsum panel designed for interior applications requiring increased resistance to incidental moisture.

e²XP Interior Extreme is manufactured with an enhanced moisture and mold resistant gypsum core and facer. The facers are composed of a coated fiberglass mat which provides superior moisture resistance capabilities.

It is produced in 1/2" Regular and 5/8"Fire-Shield® Type X, 4' wide in standard lengths. e²XP Interior Extreme is lightweight, scores and cuts easily and is specially coated on the front, back and sides for easy handling. e²XP Interior Extreme is easily identified by the back facer in our original purple color.

Basic Uses

e²XP Interior Extreme can be used in both wood and metal framed construction for interior wall and ceiling finishing while providing increased moisture and mold resistance. e²XP Interior Extreme is recommended for use on the interior side of exterior walls, where moisture exposure is more likely.

Enhanced performance is provided in pre-rock applications before the building envelope is completely enclosed.

e²XP Interior Extreme can be used as a substrate for tile applications outside of wet areas.

With e²XP Interior Extreme, a single gypsum panel product can be used throughout the entire project wherever gypsum board is specified.

On projects where the owner or specifier have designated fiberglass faced gypsum board exclusively for the interior, the ideal solution is e²XP Interior Extreme.

Features/Benefits

- Manufactured to meet ASTM C 1658 and applicable sections of ASTM C 1396.
- Will withstand up to 12 months of interior exposure to the elements, subject to the terms, conditions and exclusions of National Gypsum's Limited Warranties.
- Resists the growth of mold per ASTM D 3273 with a score of 10, the best possible score.*
- Provides the best moisture resistance solution for the interior side of exterior walls where moisture exposure is more likely.
- A preferred alternative to paper faced gypsum board in pre-rock applications before the building envelope is fully enclosed, which may shorten construction cycles.
- Coated fiberglass mat on face and back for easy handling.
- 5/8" Fire-Shield e²XP Interior Extreme is an approved component in specific UL fire-rated designs.
- Less than 5% water absorption per ASTM C 473.
- e²XP Interior Extreme is GREENGUARD Children & Schools℠ Certified for indoor air quality.

Limitations

- e²XP Interior Extreme is intended for interior use only.
- Panels are nonstructural and are not a nailing base.
- Do not finish joints until building is properly closed in and conditioned.
- Exposure to excessive or continuous moisture and extreme temperatures should be avoided. Gypsum panels are not recommended where they will be exposed to temperatures exceeding 125°F (52°C) for extended periods of time.
- e²XP Interior Extreme should not be used in areas subject to constant and/or excessive moisture and high humidity such as gang showers, saunas, steam rooms or swimming pool enclosures.
- e²XP Interior Extreme should not be used as a backer board directly behind tile in tub and shower areas.
- Although e²XP Interior Extreme can be utilized in horizontal assemblies such as ceilings, it should not be installed in pre-rock conditions where the potential for ponding water may occur.
- Forced air heaters should not be used to the point of creating water condensation.

Recommendations

- e²XP Interior Extreme must be stored off the ground and under cover. Sufficient risers must be used to assure support for the entire length of the gypsum panel to prevent sagging.
- Care should be taken to ensure that the panels are kept dry prior to and during installation. Adequate care should be taken while transporting, storing, applying and maintaining panels. For additional information, refer to the Gypsum Association publication, "Guidelines for Prevention of Mold Growth on Gypsum Board" (GA-238-03), which is available at *gypsum.org* under the "Download Free Gypsum Association Publications" section.

***Mold and Mildew Resistance:**

e²XP Interior Extreme was designed to provide extra protection against mold and mildew compared to standard gypsum board products. When tested by an independent lab per ASTM D 3273 ("Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber"), e²XP Interior Extreme achieved a score of 10, the best possible score for this test. No material can be considered "mold-proof," nor is it certain that any material will resist mold or mildew indefinitely. When used in conjunction with good design, handling, and construction practices, e²XP Interior Extreme can provide increased mold resistance versus standard gypsum board products. As with any building material, avoiding water exposure during handling, storage and installation, and after installation is complete, is the best way to avoid the formation of mold or mildew.

Installation

Install e²XP Interior Extreme in accordance to GA-216 "*Application and Finishing of Gypsum Panel Products*" and ASTM C 840 "*Standard Specification for Application and Finishing of Gypsum Board for Non-Fire rated Construction.*" In addition, the following recommendations should be followed:

- Installation of fire-rated assemblies shall be in accordance with the details found in the UL Fire Resistance Directory or Gypsum Association GA-600 Fire Design Manual.
- Fasteners shall be driven just below the surface, avoiding damage to the core and/or facer.
- Unlike paper faced gypsum board, e²XP Interior Extreme can be installed in pre-rock applications, yet water sensitive materials should not be installed adjacent to e²XP Interior Extreme until the building is dried in.
- For optimal results when transitioning from e²XP Interior Extreme to paper faced gypsum board, panels should be butted at corners or above drop ceilings.

Finishing

The finishing of e²XP Interior Extreme panels should be specified and performed in accordance with Gypsum Association Publication GA-214 "Recommended Levels of Gypsum Board Finish". Joints between e²XP Interior Extreme panels may be finished with either paper tape and ready mix joint compound or fiberglass mesh tape and setting compound such as ProForm BRAND Interior Finishing Products. In most areas to receive final decoration, skim coating of the entire surface is recommended.

In critical lighting conditions or when using gloss, semi-gloss or enamel paints, finish panels to a Level 5 finish as outlined in GA-214.

Decoration

For best painting results all surfaces, including joint compound, should be clean and dust-free. To improve fastener and joint concealment, a coat of a quality drywall primer is recommended to equalize the porosities between surface facer and joint compound.

The level of finish selection and paint required to provide the specified or desired finished characteristics is the responsibility of the architect or contractor.

A gypsum panel that is to have a wallcovering applied should be prepared and primed as described for painting.

Safety

The following standard work practices are recommended: Installers should wear long pants and a long-sleeved loose fitting shirt. Protective gloves and special eye protection (goggles or safety glasses with side shields) should be used. A dust mask should be worn when sanding and additional breathing protection may be needed in extremely dusty conditions. Do not use a power saw to cut this product.

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 MSDS for this product, available at ***purplechoice.info*** before use.

Fire Resistance Ratings

The 5/8" Fire-Shield e²XP Interior Extreme Gypsum Panel is tested in accordance with ASTM Standard E 119 and is classified as Type X for use in specific UL listings. The UL core designation for 5/8" Fire-Shield® e²XP is FSW-6.

Technical Data

PHYSICAL PROPERTIES

	1/2" e²XP Interior Extreme Regular	5/8" e²XP Interior Extreme Fire-Shield – Type X
Nominal Thickness	1/2"	5/8"
Standard Width	4'	4'
Standard Lengths	8'–12'	8'–12'
Nominal Weight, (lbs./sf)	2.0	2.5
Permeance, (perms)	>10	>10
Linear Expansion	6.25×10^{-6}	6.25×10^{-6}
Coefficiency of Thermal Expansion	9.26×10^{-6}	9.26×10^{-6}
Flexural Strength, parallel,, lbf	≥80	≥100
Flexural Strength, perpendicular, lbf	≥100	≥140
"R" Value (C 518)	0.43	0.50
Noncombustible per ASTM E 136	Yes	Yes
Nail Pull Resistance minimum, lbf	80	90
Hardness core, edges and ends	≥15	≥15
Water Absorption (% of weight) (ASTM C 473)	≤5	≤5
Surface Water Absorption (grams)	≤1.6	≤1.6
Surface Burning Characteristics Flame Spread/Smoke Developed (E 84)	0/0	0/0
Humidified Deflection	2/8"	1/8"
Bending Radius	6'	8'
Resists Growth of Mold	Yes	Yes
Edges	Tapered	Tapered

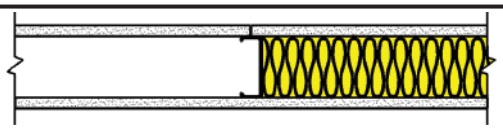
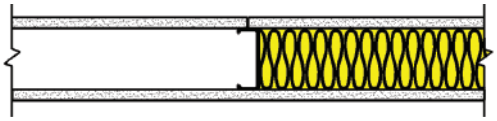
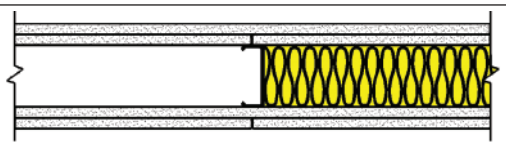
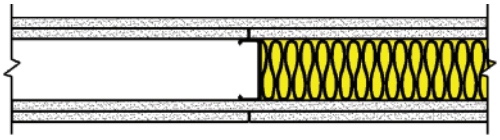
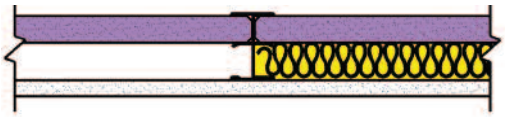
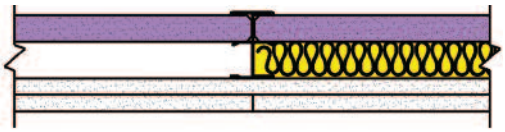
APPLICABLE STANDARDS AND REFERENCES

ASTM C 1658 – Standard Specification for Glass Mat Gypsum Panels
Appropriate sections of ASTM C 1396 – Standard Specification for Gypsum Board
ASTM C 473 – Standard Test Methods for Physical Testing of Gypsum Panel Products
ASTM D 3273 – Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
ASTM D 6329 – Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers (12-week test)
ASTM C 840** – Standard Specification for Application and Finishing of Gypsum Board
ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM E 136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C
ASTM C 518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
Gypsum Association GA-216** – Application and Finishing of Gypsum Panel Products
Gypsum Association GA-214 – Recommended Levels of Gypsum Board Finish
Gypsum Association GA-238 – Guideline for Prevention of Mold Growth on Gypsum Board
Gypsum Association GA-600 – Fire Resistance Design Manual
National Gypsum, Gypsum Construction Guide

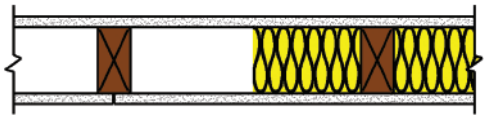
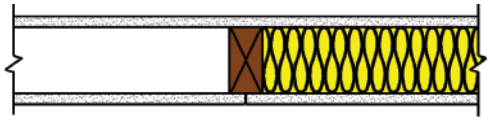
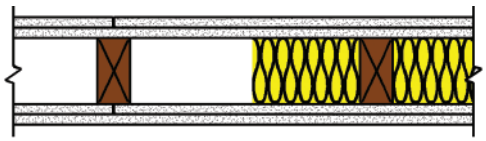
** Good building practices should always be followed to minimize adverse moisture exposure. When conditions require installation of board before the building is fully enclosed, the use of e²XP Interior Extreme is the best possible solution.

Fire-Rated Assemblies

UL LISTED e²XP PARTITIONS – STEEL FRAMING

Fire Rating	UL Design No.		Description
1 hr. Load Bearing	U425		5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side of 3-1/2", 20 gauge steel studs 24" o.c. Joints staggered on opposite side.
1 hr.	U465/V438		5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side of 3-5/8" steel studs 24" o.c. Vertical joints staggered on opposite side.
2 hr. Load Bearing	U425		Two layers 5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side of 3-1/2", 20 gage steel studs 24" o.c. Joints staggered each layer and side.
2 hr.	U411/V438		Two layers 5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side 2-1/2" steel studs 24" o.c. Joints staggered each layer and side.
1 hr.	U499		1" Shaftliner installed between 2-1/2" steel I-studs, C-H studs, or C-T studs 24"o.c. 5/8" (15.9 mm) e²XP Interior Extreme Gypsum Panel applied horizontally or vertically to studs with 1" type S screws at 12" o.c. on side opposite shaftliner panel.
2 hr.	U497		1" Shaftliner installed between 2-1/2" steel I-studs, C-H studs, or C-T studs 24"o.c. Two layers 5/8" e²XP Interior Extreme Gypsum Panels applied vertically to studs on side opposite shaftliner panel. Joints staggered between layers.

UL LISTED e²XP INTERIOR EXTREME PARTITIONS – WOOD FRAMING

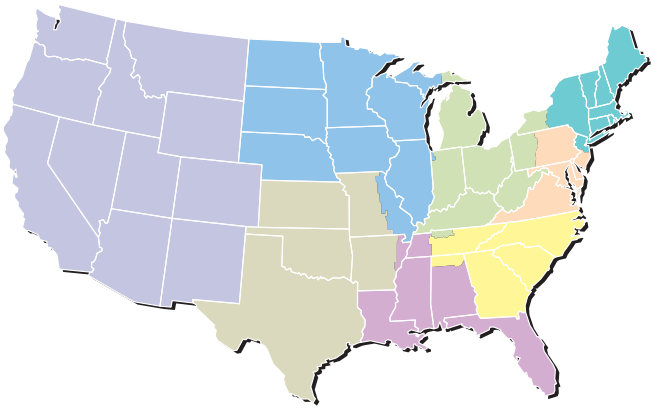
Fire Rating	UL Design No.		Description
1 hr.	U305		5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side of 2x4 wood studs 16" o.c. Vertical joints staggered on opposite side.
1 hr.	U309		5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side of 2x4 wood studs 24" o.c. Vertical joints staggered on opposite side.
2 hr.	U301		Two layers 5/8" e²XP Interior Extreme Gypsum Panels applied vertically or horizontally to each side of 2x4 wood studs 16" o.c. Joints staggered each layer and side.

UL Listed Assemblies

The 5/8" e²XP Fire-Shield Interior Extreme is classified as Type X for use in the following UL listings: G501, G503, G520, G531, L501, L508, L554, L591, N501, N502, N505, N602, S728, S736, U017, U032, U040, U204, U207, U301, U302, U305, U309, U326, U329, U330, U332, U337, U338, U339, U341, U342, U344, U351, U354, U355, U356, U357, U358, U360, U364, U368, U369, U371, U373, U379, U392, U396, U405, U411, U418, U420, U421, U425, U434, U436, U439, U442, U449, U450, U460, U465, U466, U467, U473, U475, U487, U494, U495, U497, U498, U499, U502, U504, U505, U506, U510, U512, U524, U525, U531, U617, U623, U626, U633, U646, U647, U648, U651, U652, U926, V408, V417, V419, V420, V421, V425, V430, V432, V433, V434, V435, V438, V449, V450, V452, V483, V484, V486, V488, V497, X508, X510, X516, X517, X525, X526, X527, X528, X602, X604.

In addition, 5/8 e²XP Fire-Shield Interior Extreme can be used as an insulation underlayment in properly designed/specified roof assemblies to replace gypsum board panels listed in the following UL "P" assemblies: P225, P227, P230, P235, P254, P259, P266, P302, P508, P510, P512, P514, P516, P517, P518, P521, P525, P527, P536, P540, P541, P542, P543, P701, P710, P711, P713, P714, P717, P718, P719, P720, P722, P725, P727, P728, P729, P730, P731, P732, P733, P734, P735, P738, P739, P740, P741, P742, P743, P801, P811, P815, P819, P824, P825, P826, P827, P828. Consult the roof system manufacturer or specifier for proper compatibility and application requirements of other roofing components.

CUSTOMER SERVICE SALES AREAS



Atlantic Area
Phone: (800) 237-9167
Fax: (877) 252-0430

Central Area
Phone: (800) 252-1065
Fax: (866) 232-0440

Gulf Area
Phone: (800) 343-4893
Fax: (866) 482-8940

Midwest Area
Phone: (800) 323-1447
Fax: (866) 692-8590

Northeast Area
Phone: (800) 253-3161
Fax: (866) 632-1480

Southeast Area
Phone: (800) 548-9394
Fax: (866) 732-1990

Southwest Area
Phone: (800) 548-9396
Fax: (866) 792-7520

Western Area
Phone: (800) 824-4227
Fax: (800) 438-6266

National Accounts
Phone: (800) 440-1230
Fax: (866) 622-3590

Manufactured Housing
Phone: (800) 455-3185
Fax: (800) 639-1714

Gold Bond® BRAND
e²XP®
Extended Exposure
Interior Extreme™

For the latest technical and product information, go to: purplechoice.info

LIMITED WARRANTY

(United States and Territories Only)

National Gypsum Company ("NGC") warrants to the purchasers of its e²XP® Interior Extreme™ brand gypsum panels, and to the owner at the time of installation of any building on which such product is installed, that subject to the conditions and limitations set forth below:

1. *e²XP Interior Extreme will at the time shipped by NGC be free from defects in material and workmanship that would make it unsuitable for its intended use ("Defects Warranty"); and*
2. *e²XP Interior Extreme will not deteriorate or delaminate as a result of normal use conditions or as a result of exposure to normal weather conditions in areas of use and application for which the product is intended ("Exposure Warranty").*

The Defects Warranty will remain in effect until 3 years after the date the product is purchased by the contractor for purposes of installation.

The Exposure Warranty will remain in effect until 12 months after the date of installation of the product.

The warranties provided hereunder may not be transferred or assigned.

WARRANTY CONDITIONS

This warranty applies only if the following conditions are met:

- *The installation methods are in accordance with applicable building codes and applicable written recommendations and specifications published by NGC;*
- *The product has been properly handled and stored at all times according to standard building practices, and has not been abused or used for an improper application;*
- *The problem with the 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; and*
- *The building on which the product is installed is maintained with reasonable care.*

EXCLUSIONS AND LIMITATIONS

This warranty does not cover damage or claims to the extent arising from or relating to:

- *Other manufacturers' products used with e²XP Interior Extreme;*
- *Mold, mildew, algae, fungus or other conditions involving organic growth;*
- *Installation over structural or framing members that are or which become twisted, bowed or otherwise distorted;*
- *Damage due to improper installation or building or system design;*
- *Handling or storage not in accordance with standard building or industrial practice;*
- *Failure to purchase and install e²XP Interior Extreme within 12 months from its date of manufacture;*
- *Use of e²XP Interior Extreme other than its intended use;*
- *A third-party's actions, omissions or negligence;*
- *Installations in buildings that have not been maintained with reasonable care; or*
- *The performance of other materials applied or attached to, or installed over, with or adjacent to e²XP Interior Extreme.*

This Limited Warranty is the only warranty applicable to e²XP Interior Extreme and IS IN LIEU OF AND EXCLUDES, AND NGC DISCLAIMS, ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NGC 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 prohibit the exclusion or limitation of warranties or may not allow the exclusion or limitation of incidental or consequential damages, so 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.

e²XP Interior Extreme has natural surface characteristics that result normally from its manufacture that are not to be considered defects or evidence of a breach of this warranty.

CLAIMS

All claims under this warranty must be submitted in writing to NGC within thirty (30) days from the time you discover a problem with e²XP Interior Extreme. 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

If NGC determines that the product in question does not comply with this Limited Warranty, NGC will replace the product or, at its option and for product which has been installed, will provide reimbursement to cover costs of repair and replacement up to a maximum of two times the price paid for the product at the time of purchase for installation. Such price must be properly documented by the claimant. THIS REMEDY SHALL BE THE EXCLUSIVE REMEDY FOR ANY CLAIM HEREUNDER AND IS THE TOTAL LIABILITY OF NGC FOR ANY CLAIM OF PROBLEMS OR DEFECTS WITH e²XP INTERIOR EXTREME, WHETHER BASED ON THIS LIMITED WARRANTY OR ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, NEGLIGENCE, OR STRICT LIABILITY.

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Children & Schools
GREENGUARD®
Indoor Air Quality Certified

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National Gypsum®