

CertainTeed

**AirRenew**<sup>®</sup>

Indoor Air Quality Gypsum Board



Welcome to the AirRenew family of gypsum board

**CertainTeed**  
SAINT-GOBAIN

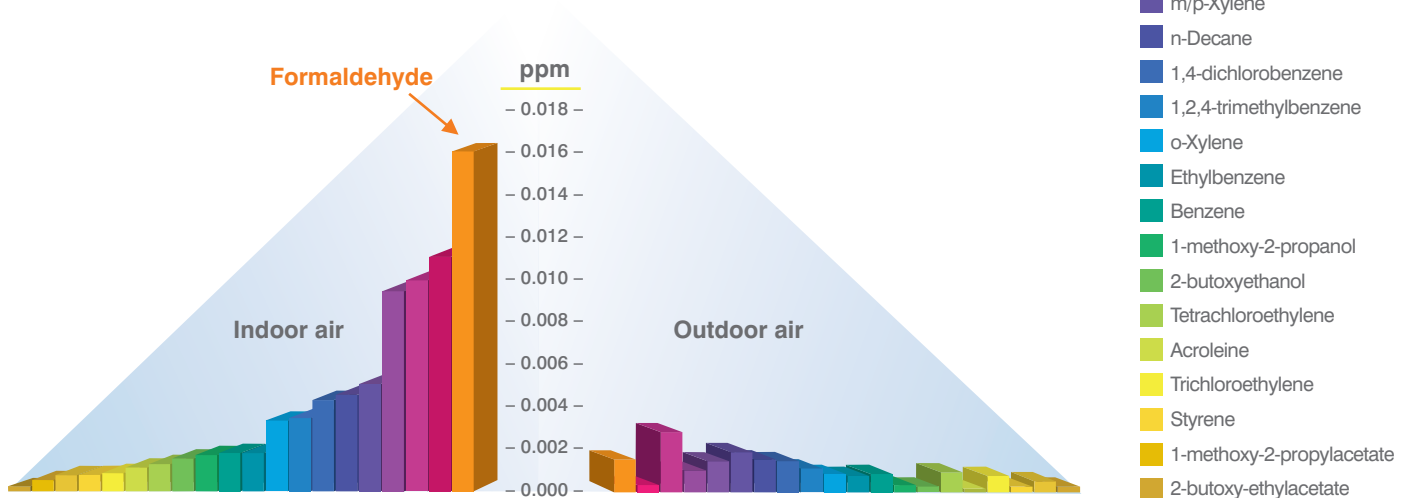
# Comfortable living starts with better indoor air quality.

Today, it's more important than ever to improve the quality of the air inside our buildings. Research indicates that people spend approximately 90% of their time indoors. Yet many VOCs (volatile organic compounds) and other contaminants are typically found throughout schools, hospitals, offices and residences. In fact, indoor air is often more contaminated than outdoor air. Poor indoor air quality has been linked to headaches, fatigue, concentration problems, allergies, asthma and more.

The indoor air environment is affected by many factors. This includes many every day use items: Cleaning materials; including perfumes, hair sprays and treated fabrics. Repair and remodeling items; including paints and lacquers, paint strippers and solvents, glues, carpets and furniture. Building materials for new construction; including unsealed plywood or particle board and urea formaldehyde foam insulation.

## Aldehydes, including formaldehyde, are the most prevalent pollutants in residences and schools.

VOC concentrations in the air



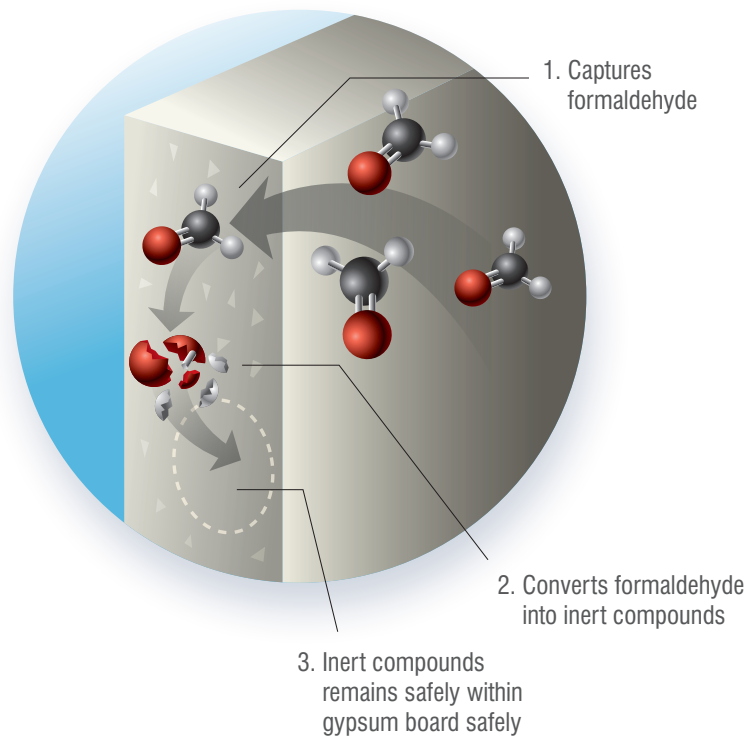
Analysis of chemical concentrations in residences, day care centers and school buildings indicate that VOCs (volatile organic compounds) are the most prevalent pollutants, with significantly higher levels in indoor air than in the outdoor atmosphere.

# AirRenew<sup>®</sup> helps take formaldehyde out of the air – and keeps it out.

## How does it work?

AirRenew uses an innovative patent pending technology to actively clean air. This advanced gypsum board captures and transforms formaldehyde into inert compounds, and never re-emits them into the air. The effectiveness of the AirRenew technology has been proven by tests conducted in accordance with ISO 16000-23, and validated by ULE.

The installation of AirRenew along with good IAQ holistic design and good building operation practices provides an effective strategy to reduce the exposure to formaldehyde.



## Mold and mildew also affect indoor air quality.

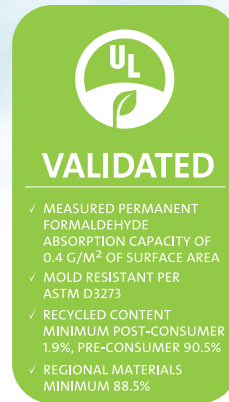
Mold is also a serious concern when it comes to indoor air quality. The potential health effects associated with mold exposures include allergic reactions, asthma and other respiratory complaints.

AirRenew M2Tech, Extreme Abuse and Extreme Impact provide enhanced moisture and mold resistance, reducing the potential for mold problems.

# AirRenew®

The AirRenew family of products are the only gypsum boards that actively absorb airborne formaldehyde improving indoor air quality over the long term.

All AirRenew products use an innovative patent pending technology to actively improve indoor air quality. They clean the air by reducing formaldehyde circulating indoors. CertainTeed offers a complete family of AirRenew drywall, including Essential, M2Tech, Abuse, and Impact.



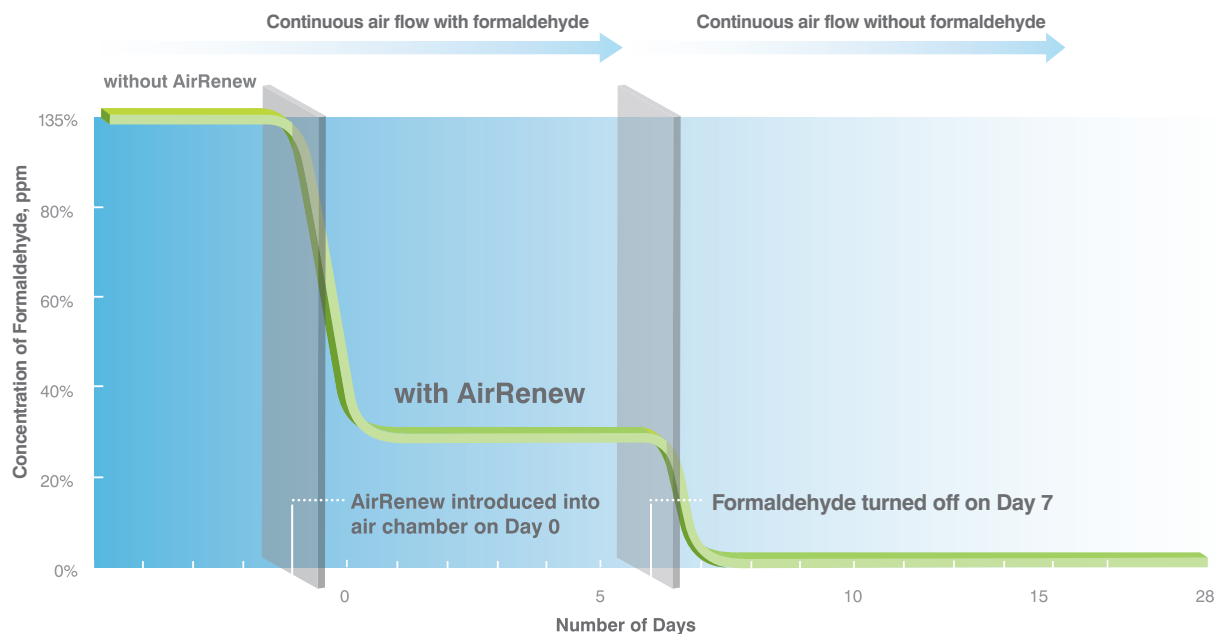
UL Environment works to advance global sustainability and environmental health. UL Environment Claim Validations are independent proof that environmentally friendly products are exactly what they claim to be.

Mold Resistant claim not applicable to AirRenew Essential. Recycled Content claim varies by manufacturing plant.

## AirRenew technology performance

### Effectiveness of AirRenew® on formaldehyde reduction

Laboratory test using ISO16000-23 test method on unpainted AirRenew.



ISO 16000-23: Indoor air — Performance test for evaluating the reduction of formaldehyde concentrations by sorptive building materials. The effectiveness of the AirRenew process has been proven by tests conducted in accordance with ISO 16000-23, and validated by ULE through their Environmental Claims Validations program.

The absorption rate of formaldehyde may be reduced by the application of primers and paints. CertainTeed Gypsum continues to evaluate the effect on AirRenew based on the wide range of primers and paints available in North America.

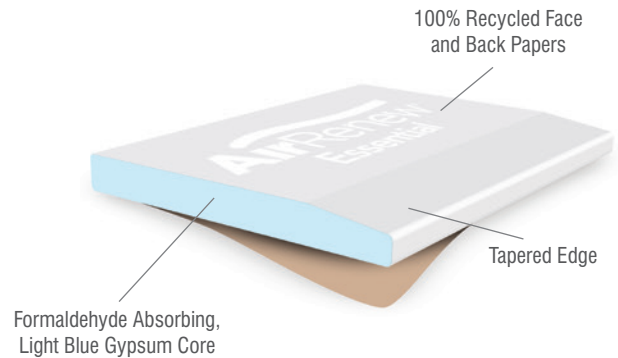
# AirRenew<sup>®</sup> Essential



Cost effective indoor air quality solution, ideal for projects where mold and moisture resistance is not required.

## AirRenew provides:

- Absorbs formaldehyde even when finished and painted with breathable, water based acrylic paints or covered with breathable wallpaper using conventional gypsum board techniques
- Easily recycled, in the same way as regular gypsum board
- Can be sent to landfill (if permitted locally) – safe to humans, animals, and ground water
- Easy handling and installation similar to other CertainTeed gypsum boards
- AirRenew Essential Type X may be substituted for CertainTeed Type X gypsum board in UL/ULC fire rated assemblies



## Product Specifications

**Product**  
AirRenew Essential Gypsum Board

**Product Standards**  
ASTM C1396  
CAN/CSA-A82.27

**Application Standards**  
ASTM C840, GA-216  
CAN/CSA-A82.31

**Thickness, inches (mm)**  
1/2" (12.7), 5/8" (15.9)

**Widths, ft. (mm)**  
4' (1220) 54" (1372)

**Standard Lengths, ft. (mm)**  
8', 12' (2440, 3660)

**Edges**  
Tapered

**Weight**  
1/2" - 1.5 lbs per SF (8.3 kg/m<sup>2</sup>)  
5/8" - 2.3 lbs per SF (11.2 kg/m<sup>2</sup>)

| Flame Spread / Smoke Developed |              |
|--------------------------------|--------------|
| ASTM E84                       | CAN/ULC-S102 |
| 15/0                           | 5/5          |

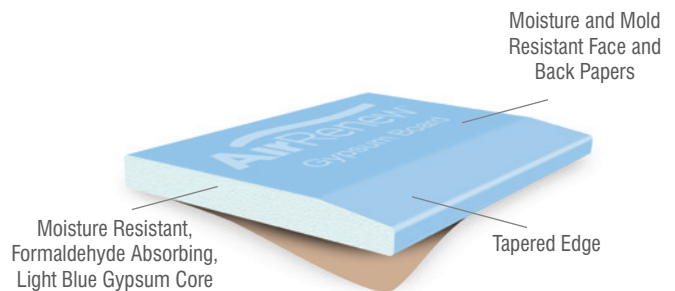
**Core**  
1/2" (12.7 mm) Regular  
5/8" (15.9 mm) Type X gypsum core,  
UL / cUL Classified, and ULC Listed  
for Fire Resistance



AirRenew® M2TECH® uses two new technologies to improve indoor air quality. First, it cleans the air by reducing formaldehyde circulating indoors. Plus it has superior M2Tech® technology, providing enhanced moisture and mold resistance.

### AirRenew M2Tech provides:

- Provides an additional zone of protection against moisture and mold
- Achieves scores of 10 and 0 for mold resistance per ASTM D3273 and ASTM G21, respectively; the best possible scores for these tests\*\*\*\*
- Enclosed in 100% recycled mold and moisture resistant paper



## Product Specifications

**Product**  
AirRenew M2Tech Gypsum Board

**Product Standards**  
ASTM C1396  
CAN/CSA-A82.27

**Application Standards**  
ASTM C840, GA-216  
CAN/CSA-A82.31

**Thickness, inches (mm)**  
1/2" (12.7), 5/8" (15.9)

**Widths, ft. (mm)**  
4' (1220)

**Standard Lengths, ft. (mm)**  
8', 10', 12' (2440, 3050, 3660)

**Edges**  
Tapered

**Weight**  
1/2" - 1.7 lbs per SF (8.3 kg/m<sup>2</sup>)  
5/8" - 2.3 lbs per SF (11.2 kg/m<sup>2</sup>)

**Mold Resistance Rating\*\*\***  
(ASTM D3273 and G21)  
10 and 0

**Moisture Resistance**  
Less than 5% total water absorption per ASTM C473

| Flame Spread / Smoke Developed |              |
|--------------------------------|--------------|
| ASTM E84                       | CAN/ULC-S102 |
| 15/0                           | 5/5          |

**Core**  
1/2" (12.7 mm) Regular  
5/8" (15.9 mm) Type X gypsum core, UL / cUL Classified, and ULC Listed for Fire Resistance

\*\*\* No mold growth detected. Note – 10 and 0, respectively, are the best scores possible for these tests.

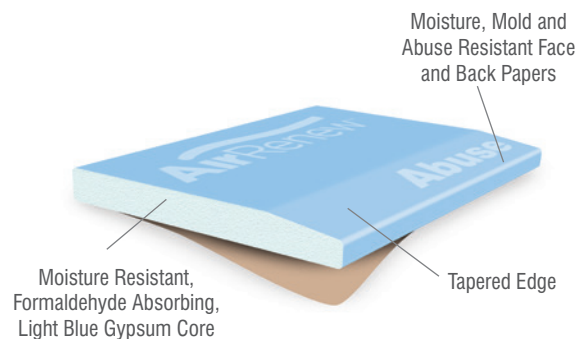
\*\*\*\* The performance of AirRenew M2Tech Gypsum Board in actual use may not accurately reproduce the results achieved in this ASTM laboratory test. Good design and construction practices that prevent water and moisture exposure of building products are the most effective strategy to avoid the growth of mold.

# AirRenew<sup>®</sup> Extreme Abuse

AirRenew<sup>®</sup> Extreme Abuse provides the increased protection and durability required for abuse prone areas that are subjected to repeated wear and tear, such as classrooms, hotels, patient rooms and public buildings. It is designed to withstand surface abrasion, indentation, and soft body impact that occurs when hard objects are dragged across the wall surface. It also permanently absorbs formaldehyde circulating indoors and provides enhanced moisture and mold resistance.

## AirRenew Extreme Abuse provides:

- Greater resistance to abuse when compared to standard gypsum board
- Lighter weight, faster installation and lower installed costs compared to traditional concrete masonry units
- Easy handling, similar to other CertainTeed gypsum boards, including easy cutting, and installing without special tools
- Contains a specially formulated moisture and fire resistant dense core
- Enclosed in 100% recycled abuse, mold and moisture resistant paper



## Abuse Resistance Classification Levels

| ASTM C1629           | Surface Abrasion | Indentation Resistance | Soft Body Impact | Hard Body Impact |
|----------------------|------------------|------------------------|------------------|------------------|
| ASTM Test Method     | D4977            | D5420                  | E695             | C1629, A.1       |
| Classification Level | 3                | 1                      | 2                | 1                |

## M2TECH™

### Product Specifications

**Product**  
AirRenew Extreme Abuse

**Product Standards**  
ASTM C1396  
CAN/CSA-A82.27  
ASTM C1629

**Application Standards**  
ASTM C840, GA-216  
CAN/CSA-A82.31

**Thickness, inches (mm)**  
5/8" (15.9)

**Widths, ft. (mm)**  
4' (1220)

**Standard Lengths, ft. (mm)**  
8', 10', 12' (2440, 3050, 3660)

**Edges**  
Tapered

**Weight**  
2.8 lbs per SF (13.7 kg/m<sup>2</sup>)

**Mold Resistance Rating\*\*\***  
(ASTM D3273 and G21)  
10 and 0

**Moisture Resistance**  
Less than 5% total water absorption per ASTM C473.

**Flame Spread / Smoke Developed**  
**ASTM E84 | CAN/ULC-S102**  
15/0 | 5/5

**Core**  
5/8" (15.9 mm) Type X gypsum core, UL / cUL Classified, and ULC Listed for Fire Resistance

\*\*\* No mold growth detected. Note – 10 and 0, respectively, are the best scores possible for these tests.

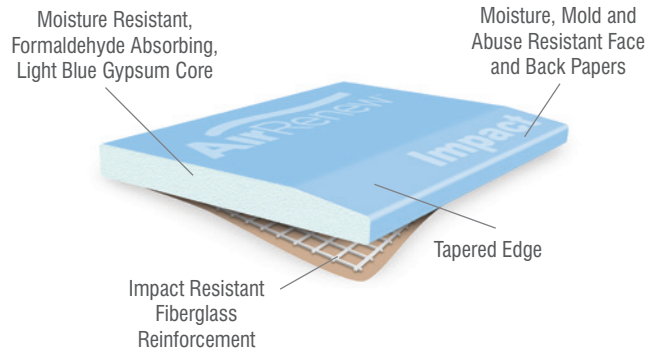
# AirRenew<sup>®</sup> Extreme Impact

AirRenew<sup>®</sup> Extreme Impact provides the highest level of protection for impact and abuse areas in high traffic applications such as hospital corridors, gymnasiums, utility rooms, airport terminals and public buildings. It is designed to withstand dents, punctures or penetration of the wall surface when struck by a hard or heavy object.



## AirRenew Extreme Impact provides:

- The highest Classification Level per ASTM C1629 for soft and hard body impact resistance
- Lighter weight, faster installation and lower installed costs compared to traditional concrete masonry units
- Easy handling, similar to other CertainTeed gypsum boards, including easy cutting, and installing without special tools
- Contains a specially formulated moisture and fire resistant dense core
- Engineered with an impact resistant fiberglass reinforcement
- Enclosed in 100% recycled abuse, mold and moisture resistant paper



## Abuse Resistance Classification Levels

| ASTM C1629           | Surface Abrasion | Indentation Resistance | Soft Body Impact | Hard Body Impact |
|----------------------|------------------|------------------------|------------------|------------------|
| ASTM Test Method     | D4977            | D5420                  | E695             | C1629, A.1       |
| Classification Level | 3                | 1                      | 3                | 3                |

## M2TECH™

### Product Specifications

**Product**  
AirRenew Extreme Impact

**Product Standards**  
ASTM C1396  
CAN/CSA-A82.27  
ASTM C1629

**Application Standards**  
ASTM C840, GA-216  
CAN/CSA-A82.31

**Thickness, inches (mm)**  
5/8" (15.9)

**Widths, ft. (mm)**  
4' (1220)

**Standard Lengths, ft. (mm)**  
8', 10', 12' (2440, 3050, 3660)

**Edges**  
Tapered

**Weight**  
2.8 lbs per SF (13.7 kg/m<sup>2</sup>)

**Mold Resistance Rating\*\*\***  
(ASTM D3273 and G21)  
10 and 0

**Moisture Resistance**  
Less than 5% total water absorption per ASTM C 473.

**Flame Spread / Smoke Developed**  
**ASTM E84 | CAN/ULC-S102**  
15/0 | 5/5

**Core**  
5/8" (15.9 mm) Type X gypsum core, UL / cUL Classified, and ULC Listed for Fire Resistance

\*\*\* No mold growth detected. Note – 10 and 0, respectively, are the best scores possible for these tests.



# AirRenew<sup>®</sup> Extreme Abuse and AirRenew<sup>®</sup> Extreme Impact add exceptional durability and increased sustainability.

Indoor air quality is an important factor to consider for any sustainable project. However, it's not the only one. In many buildings, specifically those with high traffic areas or locations susceptible to repeated wear and tear, durability is also a key factor. Hospital corridors, school classrooms, office utility closets and garages are all

examples of areas that require increased protection. Specially formulated abuse and impact resistant gypsum boards can provide the increased protection and durability required. They are a low cost and lightweight alternative that will increase the durability and sustainability of all high traffic and high impact locations.

## Outstanding performance for all categories of abuse and impact.

### Surface Abrasion:

(ASTM D4977)

Tests resistance to scuffs and scratches. The board was subjected to the abrasive motion of a wire brush traveling back and forth on the board for 50 cycles with a total load of 25 pounds.



### Indentation Resistance:

(ASTM D5420 – Gardner Impact)

Tests resistance to dents from small hard objects. A two-pound weight was dropped on the board from a height of 36" onto a hemispherical die, striking the board surface with an impact energy of 72 inch-pounds (8.1 J).



### Soft Body Impact:

(ASTM E695)

Tests the impact of heavy soft objects. A standard leather bag was filled with 60 pounds (27.2 kg) of steel pellets and swung through an angular distance towards the board.



### Hard Body Impact:

(ASTM C1629, Annex A.1)

Tests resistance to hard objects into the stud cavity. The board was struck with a weighted steel ram with increasing weight being added to the ram until it penetrated the board surface.



Classifications range from Level 1 to 3 with Level 3 providing the best abuse or impact resistance.






# CertainTeed's AirRenew<sup>®</sup> gypsum board family



The AirRenew gypsum board family of products is ideal for every area in every building, including hospitals, schools, offices and residences. Only AirRenew actively improves air quality, and AirRenew Extreme Abuse and AirRenew Extreme Impact also provide enhanced durability and protection.

**AirRenew<sup>®</sup>**  
Extreme Abuse

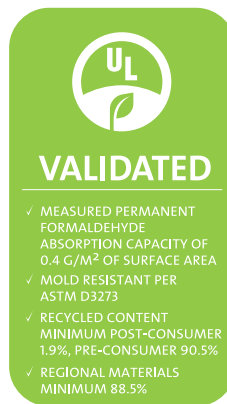
# of products

|                           | <br>INDOOR AIR QUALITY | <br>SUSTAINABLE MATERIALS<br>RECYCLED CONTENT* | <br>FIRE RESISTANCE | <br>MOISTURE & MOLD RESISTANCE | <br>DURABILITY |
|---------------------------|---|---|---|---|---|
| AirRenew Essential        | ✓   | ✓   |   |   |   |
| AirRenew Essential Type X | ✓   | ✓   | ✓   |   |   |
| AirRenew M2Tech           | ✓   | ✓   |   | ✓   |   |
| AirRenew M2Tech Type X    | ✓   | ✓   | ✓   | ✓   |   |
| AirRenew Extreme Abuse    | ✓   | ✓   | ✓   | ✓   | ✓   |
| AirRenew Extreme Impact   | ✓   | ✓   | ✓   | ✓   | ✓✓  |

\* Plant dependent



[www.AirRenew.com](http://www.AirRenew.com)



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Mold Resistant claim not applicable to AirRenew Essential. Recycled Content claim varies by manufacturing plant.

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SAINT-GOBAIN

Gypsum



# AirRenew<sup>®</sup>



[ **Be Certain** ] Confidence worth building on.™

**ASK ABOUT ALL OF OUR OTHER CERTAINTEED<sup>®</sup> PRODUCTS AND SYSTEMS:**

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