

CertainTeed

AirRenew[®]

Indoor Air Quality Gypsum Board



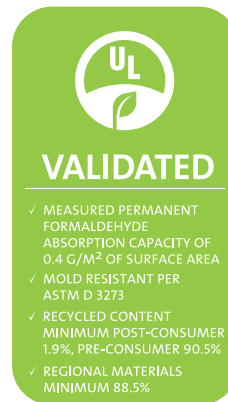
Only AirRenew absorbs VOCs
and cleans the air.

CertainTeed
SAINT-GOBAIN



is the only gypsum board that actively cleans VOCs** out of the air, improving indoor air quality for generations.

AirRenew® uses two innovative technologies to actively improve indoor air quality. First, it cleans the air by permanently removing VOCs** circulating indoors and keeps them out. AirRenew also incorporates M2Tech®** technology, providing enhanced moisture and mold resistance.



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.

Clean the air and get increased durability and sustainability.



Increased durability for abuse prone areas.



Achieves highest level of impact resistance.



* Patent pending

** VOCs (volatile organic compounds) - formaldehyde and other aldehydes.



Clean VOCs^{**} out of the air with AirRenew[®].



People spend approximately 90% of their time indoors. Yet research has proven that there are many VOCs and other contaminants found throughout schools, hospitals, offices and residences.

In fact, studies have shown that indoor air is often more polluted than outdoor air.

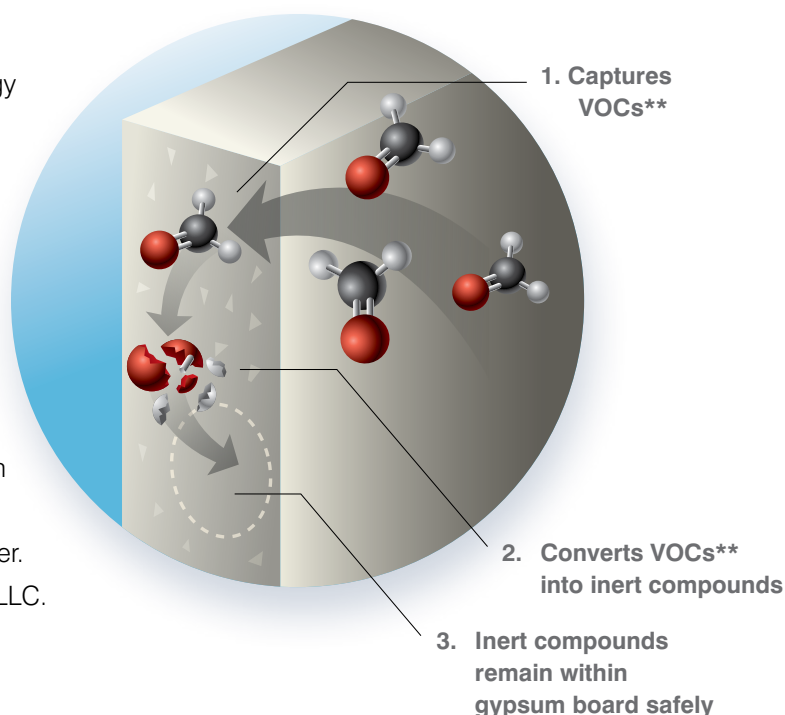
Only the AirRenew gypsum board family of products actively cleans the air, removing VOCs and improving indoor air quality.

AirRenew[®] takes VOCs out of the air – and keeps them out.

How does it work?

AirRenew uses a new and innovative technology developed by CertainTeed to actively clean air. This advanced gypsum board captures and transforms VOCs into inert compounds, eliminating them completely. The effectiveness of the AirRenew process has been proven by tests conducted in accordance with ISO 16000-23.

AirRenew continues to effectively clean air even when used with multiple coats of water based acrylic or epoxy paints and breathable wallpaper. Tests conducted by Cornerstone Laboratories LLC.



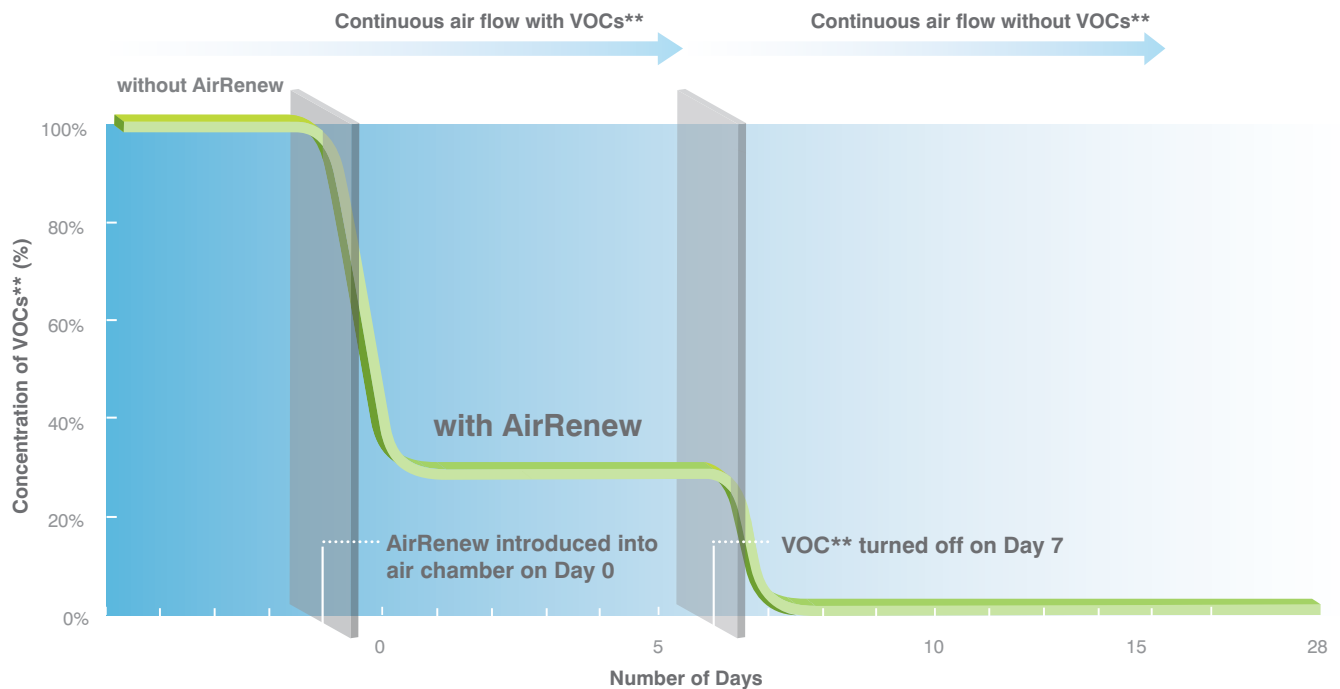
Mold and mildew also affect indoor air quality.

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.

There is no practical way to eliminate all mold and mold spores in the indoor environment, but specifying

moisture and mold resistant building materials such as AirRenew and other CertainTeed and M2Tech[®] gypsum board products greatly reduces the potential for mold problems.

AirRenew[®] starts working immediately.
And keeps on working up to 75 years.



ISO 16000-23: Indoor air — Performance test for evaluating the reduction of formaldehyde concentrations by sorptive building materials.
Tests conducted at CertainTeed Research Center in Blue Bell, PA, witnessed by a third party, Resources Applications Designs & Controls, Inc. (RADCO).

AirRenew permanently removes VOCs from the air.

VOCs are found throughout hospitals, schools, offices and residences.

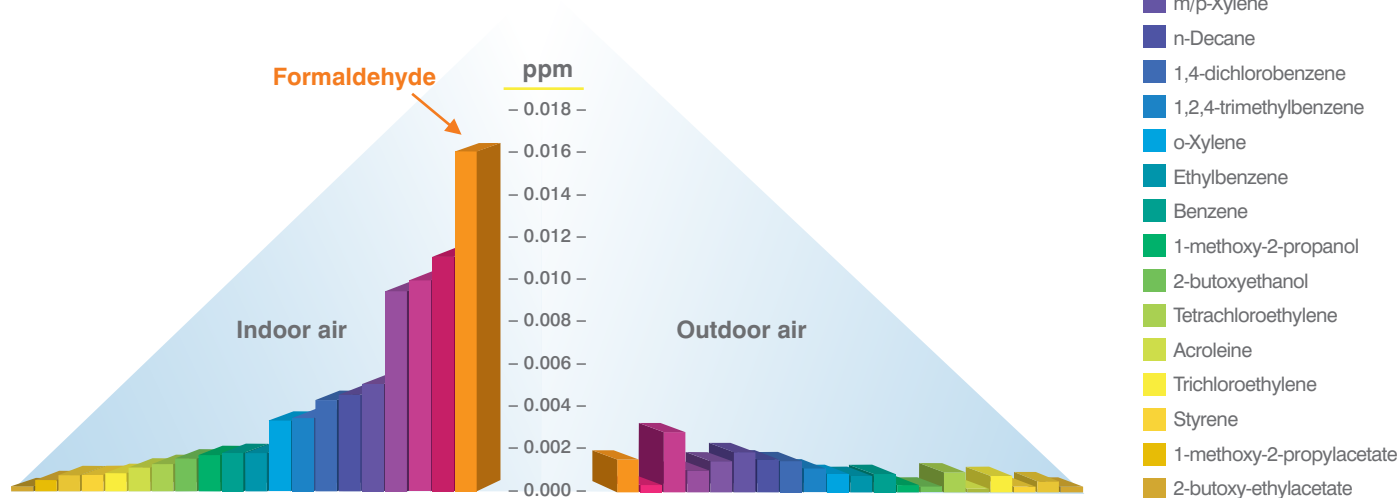
Today, it's more important than ever to improve the quality of air inside our buildings. Research indicates that people spend approximately 90% of their time indoors. Yet many VOCs and other contaminants are typically found throughout schools, hospitals, offices and residences. Poor indoor air quality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

Where are the VOCs coming from?

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® uses two new technologies that improve air quality and provide peace of mind for generations. First, it cleans the air by permanently removing VOCs** circulating indoors. Plus it has superior M2Tech®* technology, providing enhanced moisture and mold resistance.

AirRenew provides:

- Up to 75 years of effective VOC** absorption based on tests and analysis
- Maintains effectiveness even when finished and painted with most water based acrylic and epoxy paints up to 25 coats, 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 Type X may be substituted for CertainTeed Type X and M2Tech Type X gypsum board in UL/ULC fire rated assemblies
- Also available: **AirRenew Basic** (without M2Tech Technology), **1/2" Regular or 5/8" Type X gypsum**. Features the same VOC absorbing qualities as AirRenew. Acceptable for applications where mold and moisture resistance is not required

Also Includes:



- Provides an additional zone of protection against moisture and mold
- Achieves scores of 10 and 0 for mold resistance per ASTM D 3273 and ASTM G 21, respectively; the best possible scores for these tests****



Product Specifications

Product
AirRenew Gypsum Board

Product Standards
ASTM C 1396
CAN/CSA-A82.27

Application Standards
ASTM C 840, 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/m²)
5/8" - 2.3 lbs per SF (11.2 kg/m²)

Mold Resistance Rating***
(ASTM D 3273 and G 21)
10 and 0

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

Flame Spread / Smoke Developed
ASTM E 84 | 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

* Patent pending

** VOCs (volatile organic compounds) - formaldehyde and other aldehydes.

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

**** The performance of AirRenew 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[®] Extreme Abuse and AirRenew[®] Extreme Impact add exceptional durability and increased sustainability.

Indoor air quality is an important factor to consider for any sustainable project. 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 D 4977)

Tests resistance to scruffs 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 D 5420 –
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 E 695)

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 C 1629,
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.

AirRenew® Extreme Abuse

AirRenew® Extreme Abuse provides the increased protection and durability required for abuse prone areas that are subjected to repeated wear and tear, such as classrooms, patient rooms and public buildings. It also permanently absorbs VOCs 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
- Up to 75 years of effective VOC** absorption based on tests and analysis
- Contains a specially formulated moisture and fire resistant dense core
- Enclosed in 100% recycled abuse, mold and moisture resistant paper

Also Includes:



Abuse Resistance Classification Levels

ASTM C 1629	Surface Abrasion	Indentation Resistance	Soft Body Impact	Hard Body Impact
ASTM Test Method	D 4977	D 5420	E 695	C 1629, A.1
Classification Level	3	1	2	1

Product Specifications

Product
AirRenew Extreme Abuse

Product Standards
ASTM C 1396
CAN/CSA-A82.27
ASTM C 1629

Application Standards
ASTM C 840, 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/m²)

Mold Resistance Rating***
(ASTM D 3273 and G 21)
10 and 0

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

Flame Spread / Smoke Developed
ASTM E 84 | **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

* Patent pending

** VOCs (volatile organic compounds) - formaldehyde and other aldehydes.

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

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AirRenew® Extreme Impact

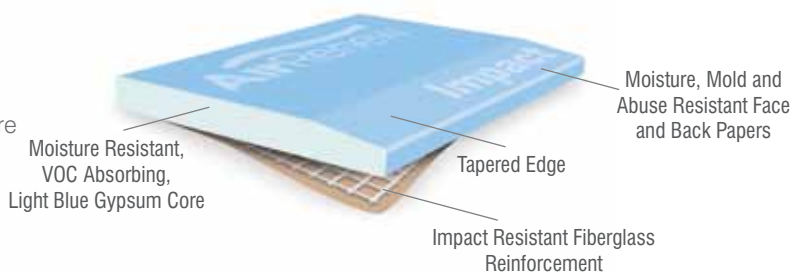
AirRenew® Extreme Impact provides the highest level of protection for impact and abuse areas in high traffic applications such as hospital corridors, gymnasiums, utility rooms, airport terminals and public buildings.

AirRenew Extreme Impact provides:

- The highest Classification Level per ASTM C 1629 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
- Up to 75 years of effective VOC** absorption based on tests and analysis
- 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



Also Includes:



Abuse Resistance Classification Levels

ASTM C 1629	Surface Abrasion	Indentation Resistance	Soft Body Impact	Hard Body Impact
ASTM Test Method	D 4977	D 5420	E 695	C 1629, A.1
Classification Level	3	1	3	3

Product Specifications

Product
AirRenew Extreme Impact

Product Standards
ASTM C 1396
CAN/CSA-A82.27
ASTM C 1629

Application Standards
ASTM C 840, 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/m²)
Mold Resistance Rating***
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10 and 0
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Less than 5% total water absorption per ASTM C 473.

Flame Spread / Smoke Developed
ASTM E 84 | **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

CertainTeed's AirRenew[®] gypsum board family of products



AirRenew[®]
Extreme Impact

AirRenew[®]

AirRenew[®]
Extreme Abuse

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®



ASK ABOUT ALL OF OUR OTHER CERTAINTEED® PRODUCTS AND SYSTEMS:

ROOFING • SIDING • TRIM • DECKING • RAILING • FENCE • FOUNDATIONS
GYPSUM • CEILINGS • INSULATION • PIPE

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