Building with conscience.

StoGuard®

Air & Water-Resistive Barriers

Facades

The StoGuard® family of air and water-resistive barrier systems protect buildings against air leakage and moisture intrusion and are featured in all Sto wall systems.

Building success with a complete system

StoGuard is a complete air & water-resistive barrier system for all types of substrates and buildings. The StoGuard system can function independently behind non-Sto claddings or be seamlessly integrated into Sto's fully engineered systems, ensuring complete continuity and compatibility of the air and water-resistive barrier across the entire building envelope.

Makes any wall a better wall.

To ensure the effectiveness of an air barrier, it must maintain continuity throughout the facade. This includes verifying compatibility with other building envelope components, such as roofing materials and foundation waterproofing, as well as ensuring seamless connections around wall assembly penetrations like rough openings, scuppers, and dryer vents. StoGuard includes air & water-resistive barrier components for detailing at joints, seams, and rough openings, and for transitioning to other materials in wall construction.

StoShield™ SA AWRB with StoGuard® Termination at Grade Detail

Protection, Continuity, and Compatibility

Establishing continuity and consistency across the entire structure is critical for the success of an air barrier system. Self-adhered membranes (SAMs) and fluid-applied systems each offer distinct benefits. Sto has the optimal solutions to overcome challenges in maintaining continuity around openings, penetrations, and other critical details, which can be time-consuming and challenging to manage without the proper tools. Fluid-applied StoGuard components simplify the process by easily covering complex shapes and offering a monolithic or seamless field and transitions. Self-adhering StoGuard components are easy to apply, provide immediate waterproofing with no cure time, and are very durable. The project and conditions will determine the ideal components. StoGuard's cross-compatibility between fluid-applied and SAM components means that you can choose the right solution every time, including a mix-and-match hybrid —the best of both worlds.

StoGuard offers a diverse range of products and advanced chemistries tailored to meet specific performance needs. Whether the project requires a low-temperature air and water resistive barrier (AWRB) or one that can be applied to intricate designs, StoGuard provides solutions, including vapor-permeable and impermeable self-adhered membranes, as well as traditional acrylic and premium STPE (Silyl-Terminated-Polyether) liquid-applied AWRBs. Specific components are designed to perform in cold and wet weather, enabling faster installation schedules. Once installed, StoGuard delivers superior performance compared to alternatives. It is weather-resistant, rigorously tested, and engineered to minimize water damage risks, offering robust protection against the elements. Additionally, StoGuard is mold and mildew resistant, has a low-VOC composition for improved safety and health, and reduces unwanted air movement, which helps lower energy costs.

Features	Benefits
Liquid-applied and self-adhered options	Choice of best technology to fit the project
Low VOC	Safe to use
Mold and mildew resistant	Promotes healthy indoor air
Seamless, monolithic fluid-applied barrier	Reduces lapping and transition error
Aggressive adhesives for self-adhering systems	Adhesion to most substrates in extreme conditions
Fire tested	Fire resistant
Primerless self-adhered membranes	Quick installation

The perfect wall

An unprotected wall is at the mercy of air and water. Moisture can enter a building in three different ways – through air leakage, vapor diffusion/condensation, and bulk water entry (leaks). Air leakage through the building envelope can be a source of condensation and water accumulation in walls. It is also a source of heat loss in cold months and a carrier of pollen and other airborne contaminants that can infiltrate and affect indoor air quality. Most building codes today require an air barrier in wall construction, which can enhance building durability, reduce energy consumption, and improve occupant comfort (see Effects from the Reduction of Air Leakage on Energy and Durability report: https://info.ornl.gov/sites/publications/Files/Pub106511.pdf).

StoGuard systems address those three threats as it provides the three control layers as identified by Joseph Lstiburek (BSI-001: The Perfect Wall): air/vapor/water controls layers. When combining StoGuard with Sto's other fully engineered wall cladding systems, the thermal, durability and water-shedding control layers are also addressed. And that is what makes Sto unique. Unlike waterproofing manufacturers who solely focus on waterproofing a building, Sto can address the entire wall cladding systems, from the air & moisture barrier, to the insulation, all the way to the exterior cladding. One system, one manufacturer means no compatibility or continuity issues no matter what the aesthetic of the building is.

StoGuard System

Vapor Retarder
To control the flow of water vapor from areas of high to low pressure, minimizing condensation.

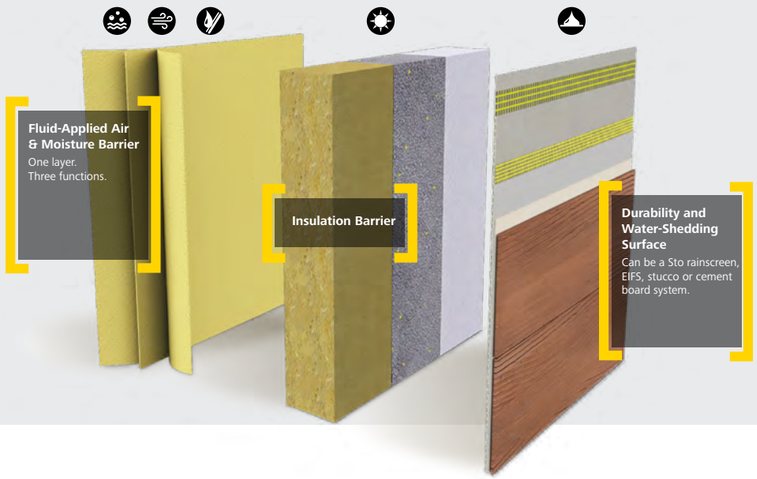
Air Barrier
To limit the uncontrolled flow of air through the wall assembly, reducing condensation and energy loss.

Water Penetration Barrier
Barrier inbound of the cladding, flashed to the exterior, designed and installed to prevent liquid water from entering the wall cavity.

Sto Engineered Wall System

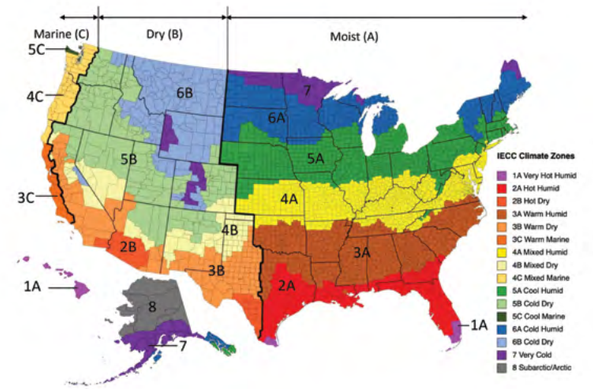
Thermal Barrier
Insulation to significantly reduce thermal bridging.

Durability and Water-Shedding
Functional finish surfaces connected to a resilient lamina in order to protect and divert water away from the wall.



Winning the battle against moisture

Moisture is the enemy of any wall assembly. It can result in poor air quality, degradation of construction materials, and mold growth. But those problems are solved with the proper moisture control of StoGuard. Without consistent moisture control, no wall assembly can be considered properly designed or well built.



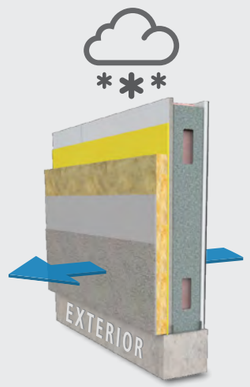
To avoid the risk of condensation, it is best to use a continuous air barrier system of interconnected air barrier materials such as StoGuard around the building envelope to control air leakage. It is also essential to consider climate when developing a moisture control solution. In cold climate, it is typically recommended to install vapor barriers on the warm-in-winter side of the wall. In hot, humid climates, do not install interior vapor retarders or else warm, moist air will condense behind the vapor retarder.

Mixed climates are tricky as the vapor drive varies based on the season; as a result, the use of a vapor barriers is not typically recommended. Always check with an engineering consultant when determining the appropriate vapor permeability.

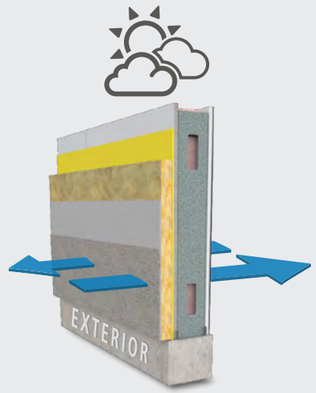
Sto offers complimentary dew point analysis when StoGuard is used on projects to provide support when designing the wall assembly.

StoGuard® employs formulations suitable for every climate, protecting buildings from water infiltration in high rainfall regions, water vapor drive and unwanted air movement in all regions.

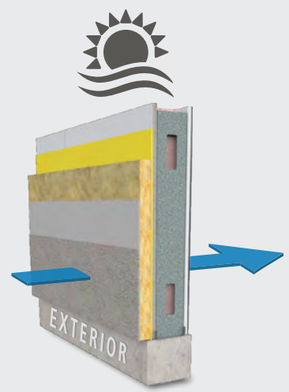
Cold Climates



Mixed Climates



Hot Humid Climates

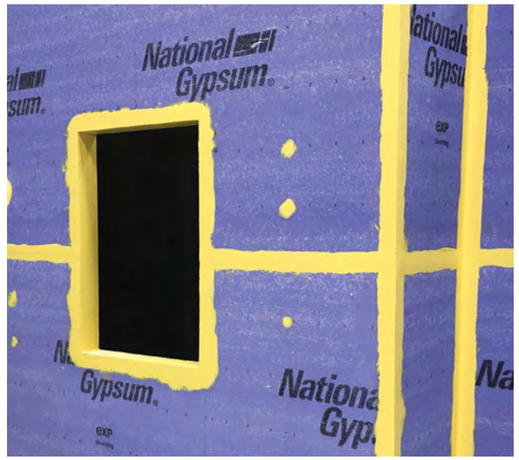


Building your StoGuard system

Choosing the right StoGuard products within the StoGuard system can ensure that your building performs at the highest level. Selecting the correct membrane is essential. Considerations include climate, wall design, the type of preferred application, the substrate over which it will be applied, the cladding under which it will go and, of course, whether permeable or impermeable membranes are required.

Additionally, StoGuard detail accessories are a vital part of the overall system. Considerations about which accessories are appropriate for your solution include whether a joint is static or dynamic, types and numbers of penetrations, types of openings, whether it provides sheathing for joints and corners.

These charts help delineate the differences between StoGuard membranes and detail accessories.



StoGuard® Wall Membrane Selection Guide

StoGuard® Product(s)	Permeability	Grade	Formulation	Application Thickness	Application Method	Application Temperature	Substrates	Claddings
StoShield™ SA VP	Permeable		Self-Adhered; UV-cured acrylic adhesive	N/A		0°F - 145°F	Glass mat gypsum, masonry, concrete, CMU, OSB, plywood	Stucco, cement board, rainscreen systems
StoShield™ SA NP	Non-Permeable		Self-Adhered; UV-cured acrylic adhesive	N/A		0°F - 110°F	Glass mat gypsum, masonry, concrete, CMU, OSB, plywood	Stucco, cement board, rainscreen systems
Sto GoldSeal™ STPE	Permeable		Silyl-Terminated-Polyether	Thin build		20°F - 110°F	Glass mat gypsum, masonry, concrete, CMU, OSB, plywood	All
Sto Gold Coat®	Permeable		Water-based acrylic	Thin build		25°F - 100°F	Glass mat gypsum, masonry, concrete, CMU, OSB, plywood	All
Sto Gold Coat® TA	Permeable		Polymeric	Medium build		40°F - 100°F	Glass mat gypsum, masonry, concrete, CMU, OSB, plywood	StoTherm® ci systems
Sto AirSeal®	Permeable		Water-based acrylic	Mid to high build		40°F - 100°F	Glass mat gypsum, masonry, concrete, CMU, OSB, plywood	All
Sto VaporSeal®	Non-Permeable		Cementitious	High build		40°F - 100°F	CMU, concrete, masonry	All
Sto ExtraSeal®	Permeable		Cementitious	High build		40°F - 100°F	CMU, concrete, masonry	Stucco
Sto Watertight coat	Permeable		Cementitious	High build		40°F - 100°F	CMU, concrete, masonry	All except StoTherm® ci systems

StoGuard®
Air & Water-Resistive Barrier System

StoGuard® Products for Transition Components, Joint Treatments and Rough Opening Protection

			Transition Components		
StoGuard® Product(s)	Sheathing Joints and Corners	Rough Opening Protection	Flashing and Penetration	Static Joints and Seams	Dynamic Joints and Seams
Sto RapidGuard®	✓	✓	✓	✓	X
StoGuard Conformable Membrane	✓	✓	✓	✓	✓
StoShield™ SA	✓	✓	✓	✓	X
StoGuard with fabric	✓	✓	✓	X	X
StoGuard RediCorner®	✓	✓	X	X	X
Sto Gold Coat® TA with mesh	✓	✓	✓	X	X

The foundation of creativity

Inspiration favors the open mind. With Sto, your creative exploration can take you anywhere. Our proven products give you unmatched freedom and the ability to achieve your vision in any color, any form, any texture, any material.

Thanks to StoGuard, practical considerations are not considerations at all during creative exploration. As essential as air and moisture barriers are to any wall, and even though they are mandated by most building codes, they do not factor into the aesthetic design process in the slightest. Because StoGuard is engineered to work equally well with any cladding that is chosen. But even better, by utilizing Sto's complete range of engineered wall systems and diverse aesthetics, the air and moisture system isn't a standalone, piecemeal solution connected as best as possible to the rest of the building envelope. Instead, it's a fully integrated feature of a holistic and creative approach. Every option is on the table.

Creativity Begins. **Sto Finishes.®**





Sto Americas

Sto Corp.
3800 Camp Creek Pkwy
Building 1400, Suite 120
Atlanta, GA 30331
USA

Phone 1-800-221-2397
www.stocorp.com

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