



# The Right Mix

News for the Applicator Professional

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## FEATURE

# Time Study Confirms StoGuard™ is 3x Faster & Easier to Install than Sheet Wraps

**StoGuard™ Spray-on Building Wrap Can Save Contractors Up to 70% in Labor Costs**

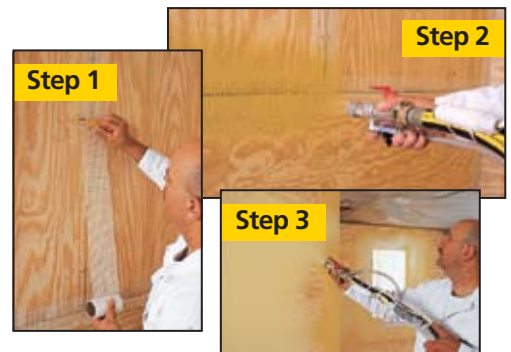
(waterproof coatings) can be applied with an airless sprayer, roller or brush. Plus, the gold or green product color makes application inconsistencies easy to identify.

Sto Corp. recently hired a third party research group to objectively compare and evaluate the application times of StoGuard products and the leading spunbonded olefin sheet wrap. Result: StoGuard is easier and faster to install.

The StoGuard assembly of products is easier to install than sheet wraps, and does not require highly skilled labor. It installs easily by paint, waterproofing or EIFS/stucco contractors without special training. Sto Gold Coat® and Sto EmeraldCoat®

StoGuard is continuous, structural and durable. Because StoGuard adheres to

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# StoMachine Technology Celebrates 10 Years of Service to the Building Industry

Blazing a new trail with Sto contractors and applicators, StoMachine Technology (SMT) began to make its mark 10 years ago. SMT has come a long way in that time, making an indelible mark for contractors across the country.

were the start of the SMT inventory. The efforts slowly grew with training and exposure in the field to applicators and contractors. Other innovations were added as well, such as the StoSilo Mobile in 1999.

It all started when the first StoSilo was introduced at the 1998 Distributor Meeting. Soon after, more than 10 silos

By 2000, additional introductions were added to the SMT line, including the StoPower Rasp System, the M-8 Spray

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# Fast, Accurate and Reliable Sto Technical Support Services

Sto Corp. provides a range of technical support services for the products we manufacture. Our seasoned staff of professionals is unmatched in the industries we serve. Our commitment is to provide outstanding technical support via the internet, over the telephone or in the field.

Promptness, accuracy and reliability are the hallmarks of our service. By using Sto's technical support services, contractors have benefited with solutions to many types of applications.

The address is:

[www.stocorp.com/allweb.nsf/techsupport](http://www.stocorp.com/allweb.nsf/techsupport)

These solutions can be reached easily from the home page, and

can be a valuable area to learn about new techniques and applications of popular Sto materials. Titles currently on the site include:

- Technical Help Desk
- Tech Hotlines
- Technical Articles
- Installation, Repair and Maintenance Guides
- Codes Agency Reports
- Sto Institute/AIA
- Dew Point Analysis

One of the highlights is "Ask a Wizard," an automated, online, around-the-clock response from Sto's database of FAQs and other technical inquiries. "Ask a Wizard" also features a guaranteed next business day response to specific inquiries.



## StoKnowledgeBase

Call our toll-free 800 Technical Hotline from 8 a.m. to 5 p.m. EST to speak to technical service personnel for technical inquiries. ☎

## StoMachine Technology

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SMT line up. The tour consisted of a 35-foot, all black trailer with mounted demonstration units and the ability to pull up to a distributor location or a job site to show the industry just what SMT was, and how it could help them in the real world of building.

As the decade marched on, SMT made inroads

into large projects in many major markets, including Las Vegas, where SMT firmly entrenched itself into the contractor community. To this day, SMT plays a major role in a great number of large projects because of its efficiency and ease of use.

In 2004, SMT expanded its offerings to the contractor community

Pump and the S-20 Spray Pump. These additions helped fill a need for contractors and applicators that helped evolve the solutions Sto was later able to offer the industry.

In 2001, the Sto Innovation Tour was launched to help spread the word about the cost effectiveness and labor saving benefits of the

by marketing the F-21 series of pumps, which had the ability to pump stucco onto the walls. Subsequent years brought additional innovations to the pump lines, making it easier and more cost effective to employ these machines on jobs of all sizes.

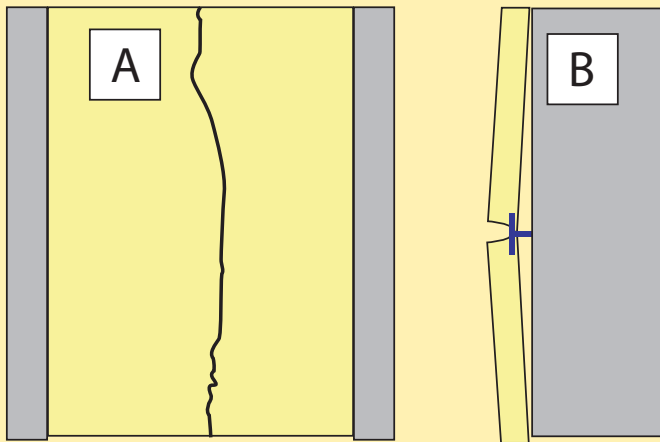
Today, there are more than 40 silos in use in North America along with a countless number of M-8, S-20 and F-21 pumps. ☎



# Wind Load and Adhesively Attached StoTherm® Systems

Wind pressure is one of many environmental loads that StoTherm Exterior Insulation and Finish Systems (EIFS) resist. Resistance to wind pressure is measured by performing standard tests<sup>1,2</sup> with loads applied perpendicular to the system. The support construction is often sheathing over wood or metal frame assemblies. Frame construction represents a worst case scenario for stiffness as compared to concrete or CMU wall construction. Sto Corp. has tested numerous frame assemblies with StoTherm EIFS adhesively attached to gypsum-based sheathings. In general, we have established that the limiting factor in the assembly is not the adhesive attachment of StoTherm EIFS, but is the sheathing or its attachment.

**Figure 1. Typical failure modes of gypsum-based sheathings attached to frame construction**



A. On the left, the back of a test panel and the effect of positive loading are shown – failure of the sheathing with cracks roughly parallel to and centered between studs. B. On the right, a side view of a test panel and the effect of negative loading are shown – failure of the sheathing at a fastener penetration.

In more than 20 years of independent laboratory testing, neither the StoTherm adhesive nor any compo-

nent of the StoTherm EIFS has been the source of failure. This kind of reliability is important because wind loads are often the source of building envelope failure during storms, and failure of the building envelope can result in catastrophic property loss and insurance claims.

In order to achieve reliable performance, it is also important to design the frame assembly to resist wind loads, and to install StoTherm systems correctly. Finally, pay attention to the installation of sheathing – particularly the fastening pattern – since this can be the determinant of success or failure during severe wind storm events. In Table 1 (please refer to the Tech Hotline “Wind and the Performance of Adhesively Attached Sto EIFS (0894-E)” under Technical Support at [www.stocorp.com/allweb.nsf/techhotlines](http://www.stocorp.com/allweb.nsf/techhotlines)) which describes many of the assemblies that have been tested with adhesively attached StoTherm EIFS, the most common failure mode that occurs at lowest pressures is (2) separation of sheathing from studs under negative loading (assembly nos 1-5, 7-9, and 11). Increasing the frequency of fasteners (assembly no. 8 for example versus no. 2) or using wafer or pan head fasteners with increased bearing area as opposed to bugle head fasteners (assembly no. 23 versus no. 3) will generally increase wind load resistance.

Table 1 is a good starting point for design verification of wind load resistance of proposed stud assemblies clad with StoTherm EIFS. Testing in accordance with applicable ASTM or other appropriate standards should then be conducted for final verification of performance.

1. ASTM E 330, Test Method for Structural Performance of Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
2. ASTM E 1886, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials 📧

# StoGuard™ Time Study

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sheathing, it becomes a part of the overall physical structure. There is no tearing or gapping between StoGuard and the sheathing, only smooth, uninterrupted coverage. According to the study, this structural characteristic allows StoGuard to outperform sheet wraps.

“When installing sheet wraps, people are always cutting corners,” says Ernesto Medina, co-owner of Stucco & Masonry Renovators in Atlanta. “With StoGuard, you can’t cut corners. It’s a complete system that keeps moisture out, and the building airtight. In our business, we know that when you properly install sheet wrap, it takes longer than installing StoGuard. We use spray equipment to install StoGuard, and it’s easy to show our installers how to use it.”

Unlike some solvent-based materials, StoGuard has low VOCs and is non-toxic. No additional breathing apparatus or special handling is necessary.



The company constructed a 672 sq. ft. building to represent typical commercial conditions. Application technicians installed each product according to its respective installation guidelines. The results confirmed that installing StoGuard spray-on building wrap is up to three times faster and easier compared to sheet wraps.

This edge in the application time can save contractors as much as 70 percent in labor costs.

StoGuard is also energy efficient. The US Department of Energy’s statistics show that up to 40 percent of the energy used to heat or cool a building is needed due to air leakage. Using StoGuard helps prevent air leakage, thus reducing energy costs. In addition, a recent study of commercial buildings by the National Institute of Standards and Technology (NIST) confirmed that

air barriers promote energy savings ranging from 30–40 percent for heating climates and 10–15 percent for cooling climates. 📧

For more information, visit the Sto Corp. website at [www.stocorp.com](http://www.stocorp.com) or call your local Sto distributor.

Building with conscience. | **sto**



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