



Performance in industry
and proprietary testing

We've been making entrance systems for the most challenging applications since the early 1970s. Along the way, we've learned a few things on how to manufacture the longest lasting entrances to provide the lowest life cycle cost.

Start with a better design to build a better door. Instead of making our heavy-duty doors heavy and rigid, we make them lightweight and flexible to better withstand the rigors of real life, while minimizing wear and tear on the entire entrance system.

Utilize modern materials and durable construction to provide the longest possible service life. High quality, corrosion-resistant materials and durable finishes ensure lasting beauty with minimal maintenance.

Test, test and retest! As they say, you can't improve what you don't measure.

- Validate performance with the most abusive industry standardized tests
- Keep testing against our own criteria
- Monitor real world test results—product life at customer installations



Third Party Testing

Assurance our FRP doors can stand up to life's toughest challenges

Our doors undergo all relevant standardized testing to ensure they will perform at the highest level. Below are the results of a few of the most demanding tests performed on the Special-Lite® SL-17 FRP Flush Door:

Looks and performs like new after 25 million cycle swing test

Our SL-17 was opened and closed according to ANSI A250.4 standard every 13½ seconds every hour of every day for more than four years. After completing 25 million cycles, the door was still performing beautifully...and looked like new...although the closer and exit device push pad had to be replaced multiple times.

Exceptional durability proven with 5 million cycles of slamming

Our SL-17 was pulled open and slammed shut every four seconds to the NWWDA T.M. 7-90 test method to determine the ability of the door and the associated hardware connections to perform under accelerated opening conditions. After a total of 5 million cycles, there was no hinge separation or operational damage to the door.

Hurricane-rated and Florida approved

Tested to Florida Building Protocols TAS 201 (impact test), 202 (uniform static air pressure test) and 203 (cyclic wind pressure loading test), all of our flush doors have achieved Florida Product Approval. These tests show that our flush doors, including the SL-17, will withstand high-velocity winds and flying debris common to hurricanes and tropical storms.

Provides blast resistance protection

To test our SL-17 doors to the ASTM F1642-04 standard, the SL-17 was attached to a large shock tube—a test device that simulates the effects of an actual explosion. When subjected to force in the 5.5 to 6.5 psi range, the SL-17 was slightly damaged but remained operational and was found to pose a minimal hazard to building occupants in the event of an explosion.

Achieves highest rating for security

The ASTM F476 standard measures a door assembly's ability to resist, delay, and frustrate certain kinds of burglaries. Special-Lite SL-17 FRP Flush Door assemblies conform to Classification Grade 40—the highest rating available under this ASTM test method! As a result, you can be assured that the SL-17 is suitable for use in commercial buildings in high risk areas.





A 215-pound sand bag is winched back to measured height.



The sand bag is released to slam against the door.



The sand bag impacts a door with bottom edge blocked.

Proprietary Testing

Our doors can take whatever life—or we—throw at them

To evaluate the performance of our doors, we've developed our own proprietary test protocols. Here are a couple of extreme examples:

Extreme Impact Test

To test just how much torture our doors can take compared to competitive doors, we devised our own extreme impact test. A bag with 215 pounds of sand was suspended in front of the door, pulled back a measured distance, and allowed to slam into the door. We continued to increase the distance incrementally until the impact force reached as much as 750 ft-lb.

We tested all doors to the point of failure. The competing doors we tested were able to resist the impacts for awhile, and then they completely blew apart at a level of force that left our doors still fully functional. This test, and similar abuses in the real world, continues to validate our unique design approach of building heavy-duty doors that are lightweight and flexible.

Sun Exposure Test

Daily exposure to extreme heat and intense direct sunlight can damage entrances just as easily as intentional abuse. To test our existing doors and latest product developments, we chose one of the most extreme North American locations we could find...the Arizona desert...with over 80% sunshine annually and average high temperatures above 100° Fahrenheit all summer long.

We subject our products to these extreme conditions for years to test their performance. In the hottest part of the summer, we've measured door skin temperatures of over 180 ° Fahrenheit. This test validates our doors' fade-resistance and ability to withstand thermal extremes.



Special-Lite doors and door components weathering the intense heat and direct sunlight of the Arizona desert.

Sustainability Testing

Meeting the demands of green construction

Long life cycle minimizes environmental footprint

Our FRP doors have passed over 25 AAMA, ANSI, ASTM and SFBC tests that show they are built to stand up to day-to-day use as well as corrosive environments, water penetration, heavy use, impacts, forced entry and even hurricanes—proving they are long lasting in their intended use. That's why we have the confidence to offer a limited lifetime warranty on our FRP doors. In addition, we provide an uncomplicated 10-year parts and labor warranty on the entire entrance.

Meets stringent indoor air quality criteria

GREENGUARD Certification is your independent assurance of low-emission performance. Our entire product line* was the first commercial entrance product line to earn GREENGUARD Certification, including the Children & Schools Standard™. The certification involves tests for formaldehyde, VOCs, phthalates and hundreds of other pollutant emissions, using scientific environmental chamber protocols. To view our GREENGUARD Certification online, visit www.greenguard.org.



Thermal performance leaves hollow metal doors in the cold

Our SL-17 Door can help reduce heating and cooling loads by providing superior thermal performance versus hollow metal doors. Compare our independent lab results with those for hollow metal doors...if you can find any.

Learn more about Special-Lite

We manufacture complete entrance systems for new construction and replacement installation in commercial, institutional, industrial and municipal applications. For more information, including detailed independent lab test results, contact your sales representative or Special-Lite.

*Excludes fire-rated doors.

The GREENGUARD INDOOR AIR QUALITY CERTIFIED Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute.



Air Quality Sciences chamber testing verifies that Special-Lite products meet GREENGUARD Certification criteria.

Thermal Properties: Special-Lite FRP Door Components, Panels, and Doors

	U-value	R-value	CRF
Special-Lite FRP Door Components			
1 1/2" thick urethane foam	.11	9.1	88
1" FRP and urethane foam panel	.23	4.3	81
1 3/4" FRP and urethane foam panel	.10	10.0	87
Special-Lite FRP Door Assembly	.29	3.4	55

Tests conducted by Architectural Testing, Inc. Contact Special-Lite for detailed test results.



Special-Lite, Inc.

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