



# FRP Flush Doors



# FRP doors: Unmatched durability and lasting value



**S**pecial-Lite® Fiberglass Reinforced Polyester (FRP) Flush Doors offer trouble-free performance and long-lasting beauty in the most demanding interior and exterior applications. Remarkably durable, they can withstand heavy traffic, abuse, or adverse environmental conditions such as high humidity, corrosive chemicals, or hurricane-force winds and continue to look like new for years. Whether for new construction or for retrofit applications, FRP Flush Doors from Special-Lite deliver the highest performance, longest life, and greatest overall value.

## Select the model that suits your needs

### SL-17 Pebblegrain FRP Flush Door

For problem entrances or challenging environments, you can't beat the super tough SL-17. It is the informed choice for K-12 schools, public buildings, sports complexes, water and wastewater treatment facilities, and other applications that quickly damage or even destroy lesser doors. They also offer an economical, easy-to-clean alternative to stainless steel for sanitary environments such as hospitals, laboratories, and kitchens. In cleanroom applications, the SL-17 can be specified with sealed seams, closed top and bottom rails, and foam-filled stiles and rails. Correctional or institutional toilet and shower door requirements call for the SL-175, a smaller version of the SL-17 with closed top and bottom rails as standard.

## Tested tough in the real world, tested tough in the lab

We've built a reputation for building doors that survive for decades in the toughest imaginable application—schools. That should be proof enough of their durability, but we weren't content to leave it at that. We hired an independent testing laboratory to simulate many hard lifetimes worth of opening and closing cycles to see just how much our doors could really take. After *25 million* cycles, the door showed no signs of excessive wear or fatigue. Our SL-17 Door has passed a host of other industry standard tests as well, including the ASTM F1642-04 blast test and Florida's TAS/201/202/203 tests for hurricane-rating. Contact us for detailed test results.





### SL-20 Sandstone-Textured FRP Flush Door

Featuring the same durable construction as the SL-17, the SL-20 features an aesthetically-pleasing, fine-grained surface finish. This more subtle texture and less glossy appearance make the SL-20 perfect for openings not expected to see deliberate abuse or vandalism.

### SL-21 and SL-23 Fire-Rated FRP-Clad Doors

We offer fire-rated FRP-clad doors to complement our FRP flush doors for interior or exterior applications that require a 90-minute fire door. The SL-21 matches the appearance and durability of our SL-17 Pebblegrain FRP Flush Door. The SL-23 features the same aesthetically-pleasing sandstone-texture finish as our SL-20. Tested in accordance with UBC 7-2, NFPA 225, and UL 10C requirements for interior applications, the SL-21 and SL-23 have passed the 1½ hour positive pressure test, hose stream test, and 250°F (121°C) temperature rise tests to achieve Warnock Hersey listing for fire-rating applications in the United States.



### FRP face sheets reduce maintenance requirements

Special-Lite FRP Doors and Panels look great for years with only routine cleaning using mild soap and water. Unlike metal or wood doors, they will never rust, corrode, crack, split, peel, or rot. With through-molded FRP face sheets, the color goes through and through so scratches won't be obvious.

SL-17 FRP doors and matching SL-37 Pebblegrain FRP Panels made with Special-Lite's exclusive SpecLite 3® FRP face sheets are even more amazing. SpecLite 3 FRP is scratch, scuff, and fade resistant. Compare that to the maintenance requirements of hollow metal doors, where you have to paint them before you even hang them, and periodically forever after.

# Better materials and designs for better doors



**S**pecial-Lite FRP Doors have been solving the toughest entrance challenges since the early 1980s, when we pioneered the application of FRP on doors. Today, we are the leading volume producer of FRP doors.

Our FRP Flush Doors are manufactured with stiles and rails of extruded 6063-T6 aluminum alloy, sized and configured for maximum strength without unnecessary, non-functional bulk. All anodized finishes are Class I (.7 mil) to ensure long-lasting beauty with only routine cleaning using mild soap and water.

Stiles and rails are joined with mitered corners and angle blocks secured by  $\frac{3}{8}$ " diameter full-width galvanized steel tie rods. The tie rods run through integral splines in the top and bottom rails, effectively making the tie rod a part of the rail. This method of construction provides the necessary flexibility to withstand abuses that would cause a mechanically-joined or welded corner to fail.

Standard and optional internal reinforcements provide secure attachment for the exact hardware specified. We can supply doors with hardware installed, or reinforced and prepped for field installation of hardware.

Aluminum perimeter stiles and rails

Internal hardware reinforcements

Mitered corner joints secured by angle blocks

Full-width  $\frac{3}{8}$ " galvanized steel tie rods

Poured-in-place urethane core

Face sheets rabbeted into integral reglets on stiles and rails

.120 fiberglass reinforced polyester face sheet

**A**ll Special-Lite FRP face sheets are .120" thick for great impact strength. Face sheets on non-rated doors are rabbeted and secured on all four sides by full-length integral reglets on the edges of the stiles and rails to form a truly flush door. Securing the face sheet continuously on four sides without troublesome screw-applied capping is only possible with mitered corner joinery. Of course, it's definitely more difficult to manufacture doors this way, so other door makers don't do it. But the fact that it results in a more durable door is all the reason we need.

### **Why a heavier, more rigid door isn't a more durable door**

Conventional wisdom says that a heavier, more rigid door is a stronger door. We say that employing sound engineering principles results in a lighter door that's actually a better door.

Heavy, rigid doors subjected to severe use and abuse place high loads on hardware and framing. Installing heavier hardware isn't the solution, though, because it simply increases the weight of the door, stressing hardware and framing all the more. The result is eventual entrance failure.

In contrast to the Heavier is Better philosophy, we make Special-Lite Doors as light as possible. We give them a high degree of flexibility and fatigue endurance to absorb the forces involved and prevent structural degradation over time. Less door mass not only means reduced wear and tear on hardware and framing for longer entrance system life, but reduced opening effort as well. But don't confuse lightweight with light-duty. All Special-Lite Doors are heavy-duty doors, and should only be compared to other heavy-duty doors.



### **At the core of our door's strength is our door's core**

The poured-in-place urethane core of our SL-17 and SL-20 Doors is not just a passive filler—it's a functional component that contributes significantly to the durability of Special-Lite Doors. After the door has been completely assembled, the core material is injected using our proprietary foam injection technology, ensuring a complete fill with a minimum five pounds per cubic foot density.

This strong, lightweight, structural urethane foam bonds firmly to the rails, stiles, reinforcements and face sheets to transform the door into a solid, completely sealed unit with incredible impact resistance and flexural strength. Our urethane foam won't absorb or be damaged by water.

# Sustainable by design— for better quality of life

## **GREENGUARD Certified for better indoor air quality**

**E**xterior doors may not be the first thing you think of with respect to indoor air quality (IAQ), but the fact is that one side of every exterior door is inside, and can impact IAQ. In addition, the corrosion resistance and durability of our FRP doors make them ideal in pool areas, locker rooms, and showers, which are clearly interior locations.

Special-Lite's FRP Doors\* were the first doors of any kind to be GREENGUARD Indoor Air Quality Certified®, including the stringent GREENGUARD Children & Schools standard. GREENGUARD Certification provides independent assurance of IAQ performance.



## **Easy-care finishes reduce maintenance costs and health risks**

Ongoing maintenance also has an impact on IAQ. Special-Lite's maintenance-friendly finishes eliminate the regular sanding and repainting necessary with hollow metal or wood doors, which produce potentially dangerous airborne particulates and fumes. And thanks to the durability of our stain-resistant finishes, even tough stains like graffiti can be removed from our products with green cleaners that won't degrade IAQ.

## **Excellent corrosion resistance makes doors last longer**

Special-Lite FRP Flush Doors provide corrosion resistance that's superior to hollow stainless or galvanized steel. Not only do the FRP face sheets and 6063-T6 aluminum alloy stiles and rails offer excellent resistance to rust on the exterior of the door, the foam core locks out water and all corrosive materials so corrosion cannot start from inside the door either.

## **Better thermal performance helps reduce energy usage**

The thermal efficiency of the building envelope has never been more important. Using Special-Lite FRP Doors can help reduce heating and cooling loads. Independent laboratory testing confirms that Special-Lite FRP Doors, with a minimum R-value of 3.45, provide superior thermal insulating properties compared to published claims from the makers of hollow metal doors.

## **All extrusions are 100% reprocessed aluminum**

We source aluminum extrusions made from prime-equivalent billet produced from 100% reprocessed 6063-T6 alloy recovered from industrial processes. These extrusions are equal in all respects to those made from virgin material while using only 5% of the energy necessary to produce virgin aluminum.

\*Excludes fire-rated doors.

The GREENGUARD Indoor Air Quality Certified Mark is a registered certification mark used under license through the GREENGUARD Environmental Institute.

## **Adjustable bottom brush reduces energy usage**

Our patent-pending SL-301 Adjustable Bottom Brush can be specified to compensate for out-of-level or out-of-position floors in new construction as well as normal settling of older buildings to reduce air infiltration and energy loss under the door bottom.



# Add your own finishing touches

## Each Special-Lite Door is made to order

Every door and frame we make is a custom solution, made to order. We can do what it takes to bring your design ideas to life with the right entrance system to suit your application. We can even provide you with submittal drawings or computer-generated design renderings to help with the specification and design process.

Unique configurations such as arched doors and transoms, odd sizes, unequal pairs, monorail cut-outs, dutch or bi-fold doors, and custom lites are no problem for our experienced craftsmen. We can make our SL-17 as large as 80" wide x 216" tall and our SL-20 as large as 48" wide x 144" tall. Both models can be as small as 12" x 12".

## A rainbow of color choices

For our SL-17 and SL-21, our SpecLite 3 pebblegrain FRP face sheets are available in a wide range of through-color choices. They are also available with a paintable pebblegrain FRP face sheet. For our SL-20, we offer a variety of colored through sandstone-textured FRP face sheets. This face sheet may also be painted. Our paintable FRP face sheets can be specified to match any of our FRP colors, our Kynar 500® colors, or any custom color.

Anodized aluminum for stiles and rails is available in standard clear, dark bronze, and black, or optional champagne, light bronze, and medium bronze. We also offer 20 established Kynar 500 paint colors, or we can match any custom color.

## Add flair and functionality

Our vision lites, FRP panels, pulls, push bars, louvers, screens, grates, and removable mullions are specifically designed to complement the performance and good looks of our door and framing products. Manufactured to the same high quality standards as all of our products, they enhance the functionality, security, safety, and appearance of your Special-Lite entrance.



Special-Lite® Vision Lites may be specified with ¼", ½", or 1" glazing. Aluminum surface-applied muntins in ½" and 1¼" widths are also available, allowing you to create just the look you want. Custom vision lites may be specified in any size or configuration, subject to the following guidelines:

- Consult the factory when total vision lite area exceeds 50% of the foam area.
- To avoid hardware conflicts, vision lites should be located at least 8" from the top, 12" from the bottom and 7" from the sides of the door.

Glass can be factory-installed or installed in the field. Rectangular vision lites are furnished with aluminum glass stops. Curved lites are typically glazed with black EPDM gasket, but may be available with aluminum glass stops. Consult the factory for details.

Kynar 500® is a registered trademark of Arkema Inc.

# Simplify your life

## with entrance solutions from Special-Lite

### **A complete entrance from a single source**

Special-Lite manufactures complete entrance solutions—doors, frames, and panels. Enjoy the convenience, reliability and performance advantages of having a complete, ready-to-install entrance supplied by a single source, delivered to the job site in a single, on-time shipment. Single-sourcing ensures proper door and frame fit, correct hardware operation, exact finish match, and longer entrance life. We can even ship doors with hardware and glazing installed, significantly reducing expensive job site labor and installation time, and preventing last-minute problems.



### **Simplify field installation with factory-applied hardware**

Special-Lite will apply hardware at no additional charge beyond hardware prep charges. Factory-installed hardware not only fits better, but the installation is warranted not to come loose under normal usage for a full 10 years. If you prefer, we can simply prep for field installation of hardware. We can supply thresholds shipped loose for field installation. All doors are shipped in special flotation cartons that protect any installed hardware. Surface-applied door closers and surface-applied sweeps must be installed in the field.

### **A warranty that really works**

We stand behind all of our products with a 10-year, 100% parts and labor warranty. Plus, we offer an additional limited lifetime warranty on our flush door models. Ask your sales representative for a copy of our warranty statement, and compare it to what other supplier warranties actually cover after all of their exclusions and limitations. You'll see that when you specify Special-Lite, you're really covered.



#### **Special-Lite, Inc.**

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