Acrylit GC

Daylighting LTP Solutions

RESOLITE FRP Composites

Quality, commitment and innovation

Resolite , with more than 50 years of experience, is a world leading manufacturer of fiberglass reinforced panels supported by four state-of-the-art manufacturing plants (all ISO 9002 Certified) and strategically located distribution centers in the United States and Canada. Our mission is to offer added value products with the highest quality standards, competitive pricing and the best customer service of the industry.

Resolite manufactures engineered construction solutions for light transmission panels (LTP's) for all metal building configurations. Our engineered solutions are manufactured under several different resin formulations and/or fiberglass reinforcements according to project requirements. Glasteel, with all the manufacturing and international marketing experience in the metal building industry has developed a new, unique and exclusive panel: **Acrylit GC**, which is manufactured with 100% acrylic resin and acrylic gel coat that provides the best resistance for yellowing and panel deterioration.

Acrylit GC

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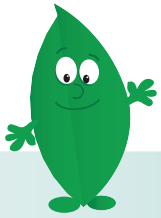


Resolite is the only manufacturer in the world that produces this unique panel using a continuous process.

Special Resin Formulation:

AcrylitGC is the only panel in the world manufactured with 100% acrylic resin and acrylic Gel Coat and fiberglass as reinforcement in a continuous process. This exclusive formulation and manufacturing process adds to the panels unique characteristics, such as:

- **Minimum Loss of Light Transmission Over the Years:**
  The AcrylitGC warranty includes a maximum loss of 8% of the initial values of light transmission after 10 years.

- **Excellent Impact Resistance:**
  The fiberglass reinforcement, like our standard and woven roving reinforced products, enables AcrylitGC panels to maintain excellent impact and load characteristics.

  Acrylit GC, hurricane tested since 2004, was the first to pass and maximize Florida's building code compliance testing for both roof and wall applications.

- **No Yellowing:**
  Due to the acrylic resin in Gel Coat, it has a minimum amount of yellowing over the years.

- **Minimum Fiberbloom:**
  No fiberbloom for 10 years.

- **No Delamination:**
  AcrylitGC will not suffer from delaminating problems

Physical Properties			
Property	**ASTM Std**	**Chopped Glass Result**	**Woven Roving Result**
Tensile Strength	D638	12,595 psi	25,772 psi
Tensile Modulus	D638	1.02 x 10^6 psi	1.52 x 10^6 psi
Flexural Strength	D790	29,151 psi	24,306 psi
Flexural Modulus	D790	0.97 x 10^6 psi	0.79 x 10^6 psi
Comprehensive Strength	D695	23,304 psi	28,905 psi
Comprehensive Modulus	D695	1.03 x 10^6 psi	1.5 x 10^6 psi
Barcol Hardness	D2583	40-50	40-50
% Elongation	D638	1.37%	1.90%
Izod Impact	D256	17.87	18.59
Building Code Class		CC2	CC2
Burning Rate	D635	<2.5 in/min	<2.5 in/min
Smoke Density	E84	105	95
Glass Content	D2584	26% ± 3%	34% ± 3%

Acrylit GC Vs. Polyester

Over time, panels made with polyester will yellow due to weather and age. **Acrylit GC** panels, given the same amount of time, will keep a clean, white appearance just as they were the day of installation.

Acrylit GC panels also have *four times* more light diffusion than polyester panels, giving your space more overall lighting.

The difference is clear. Acrylit GC is the perfect daylighting LTP Solution.

Building with Polyester Sidelights

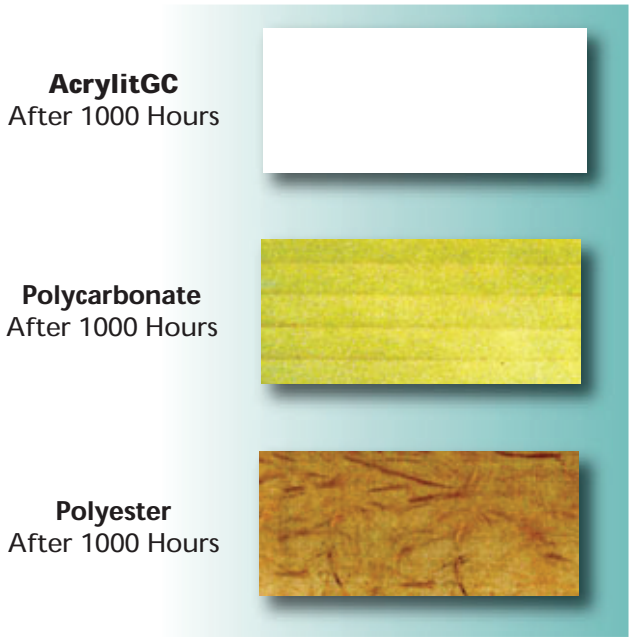
*Building on Same Property with **Acrylit GC** Sidelights*

Conservative Values - Actual Test Values Exceed 75%

Light Transmission Properties			
Property	**Polycarbonate**	**AcrylitGC**	**Std Polyester FRP**
Light Transmission	90%	**50 - 55%**	55 - 60%
Light Diffusion (% Haze)	N/A	**105 - 112%**	25 - 30%
Yellowing Index (1000 Hrs QUV) ASTM D-1925	1.96	**0.24**	3.98
U Factor	??	**.66 - 1.28**	??

Key Factor is Natural Lighting of a Building (more important than Light Transmission Values)

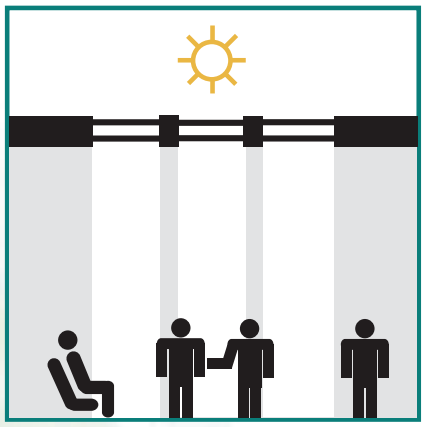
UV Weathering Test



Make it Greener

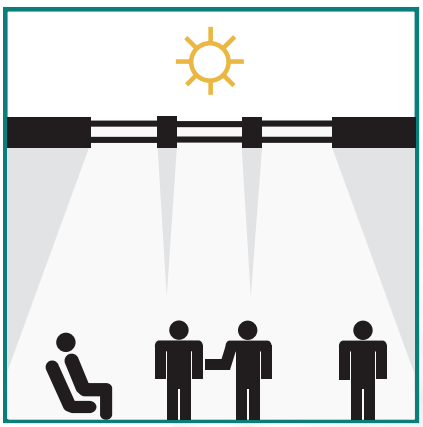
Turn OFF the lights and turn ON the savings!

Light Transmission



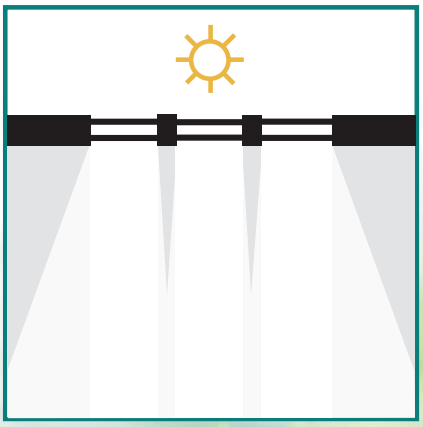
Polyester

Light Diffusion



Acrylit

Spread Factor



Comparison

Acrylit GC is now fully compliant and supportive of CBSC under California Title 24 mandated guidelines.

National Fenestration Rating Council®

Tested Data Required For California Title 24 Mandate			
Property	**Guideline**	**Single Panel**	**Dual Panel**
Thermal Transmittance	ASTM C 1363-05	1.28	.66
Solar Heat Gain Coefficient	NFRC 201-2004	.45	.31
Haze Factor	ASTM D1003	112%	112%
Thermal Emittance	ASTM E-1371	.91	.91

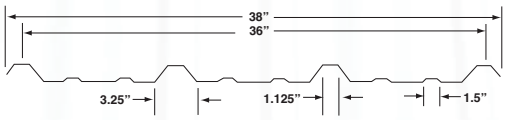
Solar Reflectance under ASTM E-1918 is **.58** as used in LTP's and **.38** with black background

Fire Resistant Data

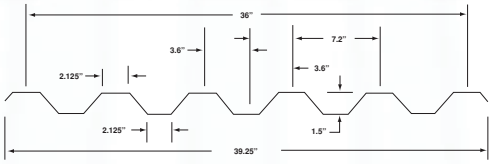
Acrylit has been tested to conform to IBC 2606.4 in testing designated by ASTM D-635 to acquire a rating of CC-2. This testing was completed in an independent laboratory environment.

Any references to flammability of Acrylit GC panels are the result of laboratory tests which compare burning characteristics of building products. This is not to imply that the panels will not burn. Exposure to flash temperatures as low as 680°F can ignite them.

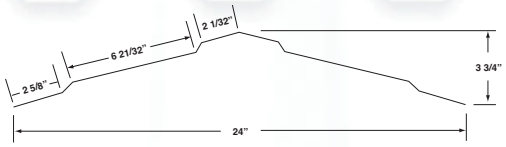
All fiberglass panels will burn under proper conditions and certainly in a fully engaged fire. When ignited, they may burn rapidly, and release dense smoke. For appropriate precautions, please request "Fire Safety Guidelines for Use of FRP Panels" from the Society of the Plastics Industry.



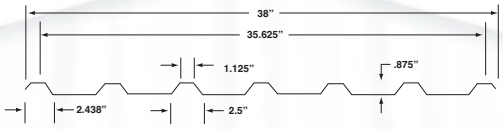
Roof Panel



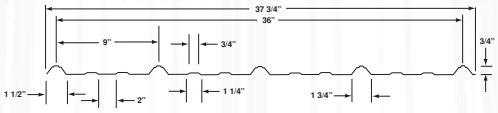
7.2 x 1.5 Rib



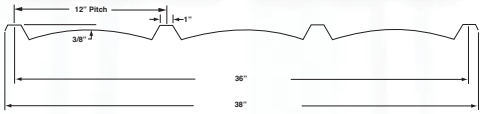
Ridge Cap



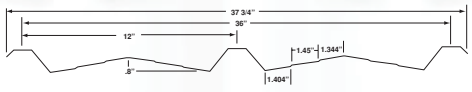
U Panel



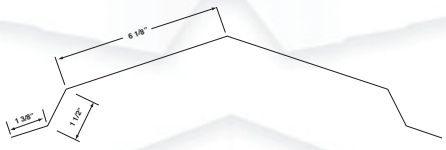
New Grand Rib III



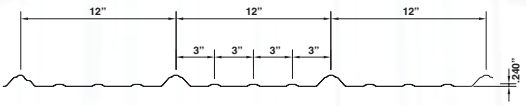
A Panel



Nucor Accent Panel



Solar Ridge Cap



UniRib

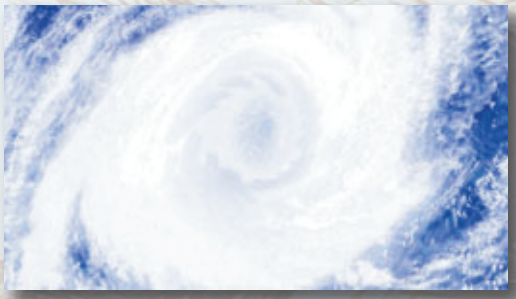
Physical Properties 8 oz.

lbs. per sq.ft.	Chopped Glass	Woven Roving
Roofing 10psf	74″	76″
Roofing 20psf	65″	70″
Roofing 30psf	57″	63″
Roofing 40psf	48″	57″
Roofing 50psf	40″	50″
Roofing 60psf	31″	44″
Siding 10psf	77″	79″
Siding 20psf	71″	74″
Siding 30psf	65″	69″
Siding 40psf	59″	65″
Siding 50psf	53″	60″
Siding 60psf	47″	56″

12 x 1.125″ Load/Span Tables R-Panel 8 Oz. Application

Design Load (PSF)	Factor of Safety = 2.00 Siding/Roofing Wind Loads DEFL. = L/60			Factor of Safety = 3.00 Roofing Positive Loads DEFL. = L/60		
	Standard Fastening Condition Two (2) - 0.596″ Dia. Fasteners (Both Sides of High Rib)			Any Fastening Condition		
	1 Span	2 Span	3 Span	1 Span	2 Span	3 Span
20	5′ 3″	7′ 1″	6′ 6″	5′ 3″	7′ 1″	6′ 6″
25	4′ 11″	6′ 3″	6′ 1″	4′ 11″	6′ 7″	6′ 1″
30	4′ 7″	5′ 2″	5′ 8″	4′ 7″	6′ 2″	5′ 8″
35	4′ 5″	4′ 5″	5′ 1″	4′ 5″	5′ 10″	5′ 5″
40	4′ 2″	3′ 11″	4′ 5″	4′ 2″	5′ 7″	5′ 2″
45	4′ 0″	3′ 6″	3′ 11″	4′ 0″	5′ 5″	5′ 0″
50	3′ 11″	3′ 1″	3′ 7″	3′ 11″	5′ 3″	4′ 10″
55	3′ 9″	2′ 10″	3′ 3″	3′ 9″	5′ 1″	4′ 8″
60	3′ 8″	2′ 7″	2′ 11″	3′ 8″	4′ 11″	4′ 6″
70	3′ 6″	2′ 3″	2′ 6″	3′ 6″	4′ 8″	4′ 3″
80	3′ 4″	1′ 11″	2′ 3″	3′ 4″	4′ 5″	4′ 1″
90	3′ 2″	1′ 9″	2′ 0″	3′ 2″	4′ 3″	3′ 11″
100	3′ 1″	1′ 7″	1′ 9″	3′ 1″	4′ 1″	3′ 10″

Acrylit GC Hurricane Tested Since 2004.



Acrylit Approval Number for Roof Construction
FL 5222 R-1

Acrylit Approval Number for Wall Construction
FL 5614

FLORIDA BUILDING CODE COMPLIANCE

- **The Florida Building Commission** has mandated that all construction of new buildings meet mandatory testing for tropical force and hurricane high wind load conditions.
- The testing includes extremely high pressures representative of tropical force and hurricane conditions.
- The testing also represents smoke and fire resistance related to a hurricane environment.
- **Acrylit GC** was the **first** to pass and maximize the testing for both roof and wall applications.

Curtain Wall Applications

Acrylit Curtain Wall is a proprietary integration of glass reinforcement, for unequaled strength, with a custom-formulated, durable acrylic monomer base resin. This produces a high-strength, ultra-high light distribution system that out performs, as well as outlasts, reinforced polyester systems.

The Acrylit translucent panel system provides uniform light throughout the space and optimizes light delivery. It does not create glare or allow direct sunlight penetration.

Do Not Walk on the Panel

Acrylit GC Panels are not intended nor does Glasteel condone any foot traffic on Acrylit GC fiberglass reinforced panels.

Installed panels or the openings for same should be protected and comply with OSHA standard 29 CFR 1910 {see paragraph 1910.23(a)(4) and (e)(8)}.

It is the contractor or erector's responsibility to comply with this regulation as well as any other local, state or federal safety requirement.

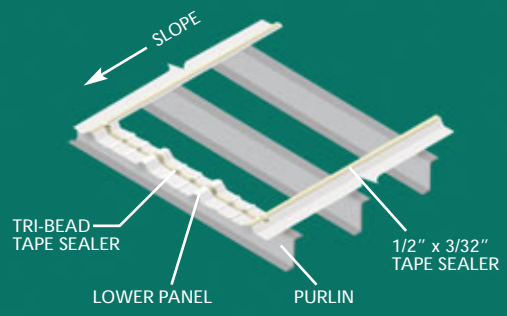
• ISO 9002: All Glasteel plants are ISO 9002 Certified • ASTM D3841: Standard Specification for Glass Fiber Panels
• UL #R5214 Recognized Component Manufacturer • ICC ER-2364
• Florida Building Approval FL 5222 R-1 and FL 5614 • California CBSC Title 24 Compliant

Storage Recommendations

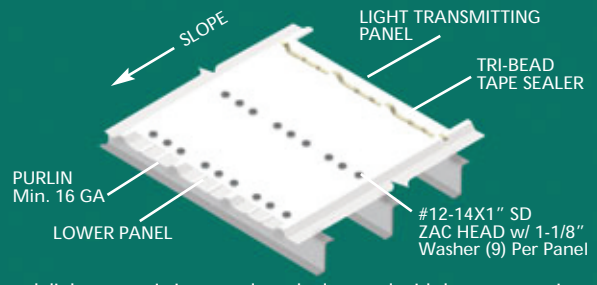
ACRYLIT GC panels must be stored properly. A single panel easily withstands exposure to sunlight, temperature change and environmental elements. Multiple panels in a stack will trap heat and moisture, causing irreversible internal clouding in the panels. This problem can be avoided by placing the panels in a well protected and shaded environment. The panels must be kept dry and elevated at one end. Compliance is mandatory for any and all warranty claims. Failure to comply with recommended storage procedures will void the warranty on the panels.

Installation Instructions

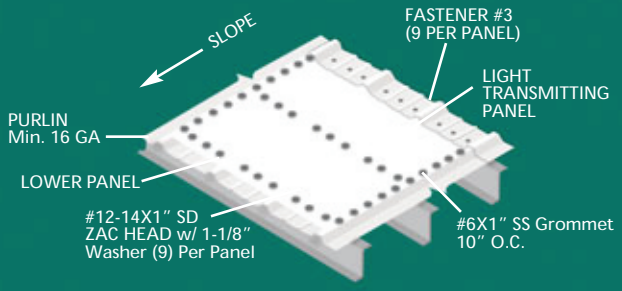
LIGHT TRANSMITTING PANEL INSTALLATION



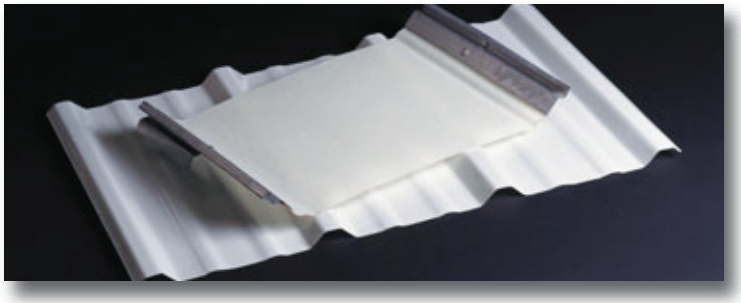
Install roof panels, leaving the light transmitting panel run open, except for lower light transmitting panel run panel. Install tape sealer to panel sidelaps and across panel width as normal.



Attach light transmitting panels at the low and mid-slope connection to the purlin with nine fasteners.



Be sure the light transmitting panel sidelaps have complete run of (1/2" x 3/32") tape sealer between the light transmitting panel and the "PBR" panel.



Cutting: Panels can be cut using power or hand saws. Saw blades should be fine-toothed carbide tipped or safety fabric reinforced abrasive disc. Face shields and appropriate safety equipment should be worn by all operators. Some typical installation details are shown at the left.

Drilling: All panels should be pre-drilled not less than 1-1/2" from the panel end, and the holes drilled a minimum of 1/16" larger than the fastener diameter. Panels can be drilled singly or several at a time.

Fasteners: When possible, fasteners should be installed at high points of the corrugation with spacings of 6" to 8" on center at panel ends, and 12" to 16" on center for intermediate purlins and siding applications.

Installation: UNDER NO CIRCUMSTANCES SHOULD PANELS BE ALLOWED TO SUPPORT UNDISTRIBUTED LOADS SUCH AS THE WEIGHT OF A HUMAN BODY. USE ONLY APPROVED ROOF LADDERS FOR INSTALLATION.

Recommended Maintenance: The surface of AcrylitGC panels, especially roof panels, should be washed periodically. This cleaning removes the accumulation of environmental residue, dust and dirt, which can combine with wind to act as an abrasive to damage the surface. Use non-corrosive cleaning compounds. Avoid using compounds containing ammonia or chlorine as these may cause panel discoloration. Cleaning should be done after a periodical inspection or a noticeable loss in light transmission which is potentially caused by environmental residues, dust, dirt or sand.

RESOLITE FRP
COMPOSITES

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