

### Composites

## SUNSTRONG® HIGH STRENGTH daylighting panels **PRODUCT CODE: \*\*\*STW**

#### PRODUCT

SunStrong High Strength (STW) translucent and opaque Fiberglass Reinforced Plastic (FRP) panels use an advanced polymer resin system with superior U.V. and color stabilizers which provide protection against color change and fiberbloom. This resin is combined with woven roving and random chopped fiberglass to achieve added strength. SunStrong high strength panels maintain superior weathering and color stability

#### PURPOSE

SunStrong High Strength panels are suitable for use as a permanent exterior or interior material that may be exposed to the elements in a wide variety of climates. SunStrong High Strength panels are used where superior weathering characteristics are required.

### DESIGN PROPERTIES

PRODUCT CODE	TYPE	WEIGHT	COLOR	LIGHT TRANSMISSION	SIZE
<b>XXXSTW</b> xxx = PROFILE NUMBER	Translucent	8 oz./ft <sup>2</sup>	405 Snowflake White	40% - 50%	As defined by tooling and approved drawing

12,000 sq. ft. per product, weight and colors required to manufacture. Orders from different customers may be batched to obtain manufacturing minimums, however lead time may be affected.

### TYPICAL PHYSICAL PROPERTIES

PROPERTY	8oz./ft <sup>2</sup>	TEST METHOD
NOMINAL WEIGHT	0.50 lb/ft <sup>2</sup> 2.44 kg/m <sup>2</sup>	---
TENSILE STRENGTH	25 x 10 <sup>3</sup> psi 172 MPa	ASTM - D638
TENSILE MODULUS	1.7 x 10 <sup>6</sup> psi 11,721 MPa	ASTM - D638
FLEXURAL STRENGTH	26 x 10 <sup>3</sup> psi 179 MPa	ASTM - D790
FLEXURAL MODULUS	0.85 x 10 <sup>6</sup> psi 5861 MPa	ASTM - D790
BARCOL HARDNESS	45	ASTM - D2583
IZOD IMPACT	14 ft-lb/in 0.75 J/mm	ASTM - D256
COEFFICIENT OF LINEAR THERMAL EXPANSION	1.8 x 10 <sup>-5</sup> in/in/°F 32.4 μm/m/°C	ASTM - D696
ICC COMBUSTIBILITY CLASSIFICATION	CC2	ASTM - D635
EXTENT OF BURNING	---	ASTM - D635
AVERAGE BURN RATE	≤ 1.0 in ≤ 25.4 mm	ASTM - D635
ICC BURNING CLASSIFICATION	C	ASTM - E84
FLAME SPREAD	≤ 200	ASTM - E84
SMOKE DEVELOPED-INDEX	≤ 450	ASTM - E84
SELF IGNITION TEMPERATURE	≥ 650°F ≥ 343°C	ASTM - D1929

**TESTING**

Crane Composites panels meet or exceed applicable requirements of the following standards:

1. ASTM D3841, Standard Specification for Glass Fiber Reinforced Polyester Plastic Panels.
2. Code requirements of most state, county and municipal building departments.
3. Crane Composites is a recognized UL90 component manufacturer.

**SPECIFICATIONS**

Crane Composites, Inc. (CCI) panels are manufactured by a continuous laminating process in lengths as required.

**COMPOSITION**

Reinforcement: Woven fiberglass roving.

Resin Mix: Polyester/styrene copolymer, inorganic fillers, and pigments.

**FINISHED PANEL QUALITY**

1. Panels shall have a wear side with a smooth or textured finish. Color shall be uniform throughout as specified. The backside shall be smooth. The backside surface may have some variations which do not affect functional properties and are not cause for rejection.
2. Physical properties shall be as set forth on Page 1.
3. Dimensions shall be as specified on purchase order, subject to the following tolerances:  
 WIDTH:  $\pm 1/8"$  ( $\pm 3.2$  mm)  
 LENGTH:  $\pm 1/8"$  ( $\pm 3.2$  mm) up to 12' (3.7 m)  
 SQUARENESS:  $\pm 1/8"$  (3.2 mm) in 48" (1.2 m) of width
4. Product quality standards and tolerances for panel weight and thickness shall be as set forth in Crane Composites' Quality Control Procedures/Standards which are available on request.

**CERTIFICATIONS**

1. FRP does not support mold or mildew (per ASTM D3273 and ASTM D3274).

**FABRICATING RECOMMENDATIONS**

NOTE: Protect your eyes with goggles; cover your nose and mouth with a filter mask; cover exposed skin when cutting CCI panels.

HAND FABRICATING: Drilling—High speed drill bit (60° cutting angle, with 12°-15° clearance) or hole saw.

CUTTING: Sheet metal shears or circular saw with reinforced carborundum or carbide-tipped blade.

PRODUCTION FABRICATING: Use carbide-tipped tools. Straight cuts can be sheared (90° cutting edge with 0.002" [0.05 mm] clearance) or sawed. For irregular cuts, use die punch or band saw.

SDS: Prior to working with our products, see our most current SDS at [cranecomposites.com/sds.html](http://cranecomposites.com/sds.html)

**STORAGE RECOMMENDATIONS**

Store panels properly. While a single panel is engineered to withstand exposure to sunlight and the elements, a stack of panels will trap heat and moisture, causing internal clouding and/or yellowing in the panels. To avoid this irreversible effect, panels must be stored in a dry, shaded, well ventilated area. Skids should be elevated at one end by wood spacers. Failure to comply with recommended storage procedures will void the warranty on the panels.

**CAUTIONS AND SAFETY WARNINGS**

DO NOT WALK ON PANELS. Crane Composites panels are not intended to support the undistributed weight of workers. Roofing ladders or 1" x 12" planks, or equivalent means of protection must be used during any work on roofs. Provide fall protection in accordance with OSHA standard 29 CFR 1910 [see paragraph 1910.23(a)(4) AND (e)(8)]. Compliance with this regulation as well as any other local, state or federal safety requirements is the responsibility of the building owner, contractor and/or erector.

**MAINTENANCE**

Panels will provide a clean, aesthetically-pleasing finished installation. However, by nature, fiberglass reinforced plastic paneling may occasionally have small areas that are aesthetically unacceptable for use. Panels should be inspected on-site prior to installation. If any portion of material does not provide an acceptable appearance, Crane Composites should be notified at once. Upon verification of unacceptability, that portion of material will be replaced by Crane Composites. Crane Composites' sole responsibility is for the replacement of defective materials but not for labor or other handling or installation expenses.

We believe all information given is accurate, without guarantee. Since conditions of use are beyond our control, all risks are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe on valid patents or as extending a license under valid patents. See our most current SDS at [cranecomposites.com/sds.html](http://cranecomposites.com/sds.html) prior to working with our products.

A global leading provider of resilient wall and ceiling coverings. Kemlite® was established in 1954 and the company changed names to Crane Composites in 2007. Crane Composites is headquartered in Channahon, IL and all our products are manufactured in the United States. We work with hundreds of distributors, ensuring our products are easily accessible and readily available to our customers.

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