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Frequently Asked Question

Q: Do I need to be concerned about thermal expansion and contraction when installing my polycarbonate panels?

A: Most Definitely! Polycarbonate panels will expand and contract due to changes in temperature. Polycarbonate expands in hot weather and contracts in cold. Figure about 1/32" per foot for 100° of temperature change with the greatest amount of expansion and contraction occurring during the Spring and Fall months. Fastener holes must be oversized to allow for this thermal movement.

One option is to "pre-

AmeriLux Newsletter

July 2015

Museum Exhibit: Breaking Grounds

"Altering Perceptions with Translucent Polycarbonate"

Created by bauenstudio (Mo Zell and Marc Roehrl, Milwaukee, WI), Breaking Grounds is part of the Marquette University Haggerty Museum of Art's current exhibition Current Tendencies IV: Topography Transformed. This exhibition features six regional artists and considers the layered meaning of "site-specific," a term used to describe art created for a particular location.



Breaking Grounds, a wood and polycarbonate structure, mirrors the existing pedestrian traffic pattern that cuts through the museum's sculpture garden. This temporary installation invites viewers to consider the body's position as one is moved from the ground into an elevated space among the tree canopy. Because of its transparency and

reflectivity, the polycarbonate panels provided Mo and Marc with a material that responded to both the users and the surrounding context while maintaining their interest in elevating 'off the shelf' materials to the condition of art.

Having seen polycarbonate used in a number of unique applications, the UWM School of Architecture and Urban Planning (SARUP) reached out to AmeriLux International with an opportunity to feature the translucent material in their temporary installation at the Haggerty Art Museum. After a visit to AmeriLux's facility in De Pere, WI, both sides were excited about an educational partnership. This project would provide

drill" pilot holes and then fasten the polycarbonate panels in place. The other option is to use a "one-step" screw. The reaming wings of a one-step screw create a hole slightly larger in diameter than the screw shaft, allowing for relative movement between the sheet and the support.

Failure to accommodate for the expansion and contraction of the polycarbonate material will result in the panel warping and/or cracking around the fastener.

Note:

It is recommended to use a large neoprene bonded washer around the fixing point, do not overtighten, and whenever possible, locate holes at least ¼" from the edge of the panel.

AmeriLux offers a wide variety of accessories for installing polycarbonate panels including "one-step" screws. Please ask a member of our knowledgeable customer service team about our available fasteners when placing your next polycarbonate order.

students with an opportunity to work with and form an intimate knowledge of polycarbonate while leveraging the transparency of the material.

A total of twenty-eight polycarbonate panels were used in the Breaking Grounds installation - fourteen 20mm 5-wall X-structure LEXAN™ THERMOCLEAR™ Plus panels and fourteen 8mm twin wall LEXAN™



VEROLITE™ panels. The 8mm panels were fabricated onsite to specific lengths to accommodate the slope of the ramp and capped with anodized aluminum u-channels. The profiles provided an aesthetic contrast to the polycarbonate without diminishing the focus on the material. As light shifts from dawn to dusk, the reflective and translucent properties of the bronze-colored panels alter the space through their engagement with the trees, landscape, and skyscape. [Click here to view a time lapse slideshow of the installation.](#)



"The layered polycarbonate offers transparency, translucency and reflection", Mo said. "Depending on the sun, time of day, and position of the viewer even the single layer of 8mm polycarbonate takes on all these qualities. These changes are significant to why the material was selected. We want people to walk away from this installation rethinking the use of this material."

[CLICK HERE TO READ FULL ARTICLE.](#)

The Haggerty Museum of Art is located on the campus of Marquette University in downtown Milwaukee, Wisconsin. For more information on the museum's fourth installment of its Current Tendencies exhibition series, please visit www.mu.edu/haggerty.

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What is in a Polycarbonate Warranty?

"Filtering Through the Confusion"

Since AmeriLux opened its doors over ten years ago, Stephanie Bitzan has been the friendly voice over the phone helping

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Check out our [Pinterest Page for Application Ideas!](#)



Polycarbonate Term

Coefficient of Thermal Expansion (CTE)

Every material has a different response to heat, which is characterized by its thermal expansion coefficient (CTE). The coefficient of thermal expansion measures how much a material expands per degree change in temperature compared to its original size. CTE is calculated by the change in length divided by the quantity of the length at room temperature, multiplied by the change of temperature.

Plastics tend to expand and contract anywhere from six to nine times more than metals. From a design perspective, understanding the relative expansion/contraction characteristics of

customers by answering technical questions and providing product information. Stephanie currently serves as a leader in the Customer Relations Department and has become a resident expert on LEXAN™ polycarbonate, its performance characteristics, and how the product compares to other 'like' products. She is often asked to explain, "What is in a polycarbonate warranty and what does the warranty cover?"

I recently sat down with Stephanie and asked her some questions to help clarify and 'clear up' the confusion surrounding the industries multiwall polycarbonate warranties.

Q&A with Stephanie Bitzan



Q: Why is the yellowing index an important factor in a polycarbonate warranty?

A: Starting from the original material color, the warranty will specify how far from the original color the product will yellow over a period of time. Besides aesthetically unappealing, yellowing is the first visual sign of polycarbonate degradation.

Q: Why is understanding the loss in light transmission important in a polycarbonate warranty?

A: Polycarbonate warranties address how much light transmission the product will lose over a period of time. The quality of light, measured by the percentage of transmitted light, has a significant impact on the performance of a multiwall polycarbonate sheet.

Q: Why is AmeriLux able to offer a 20-Year Warranty on the LEXAN™ THERMOCLEAR™ 15 multiwall polycarbonate sheet?

A: SABIC, the manufacturer of the LEXAN™ brand, has conducted years of research and product testing, developing significant advancements in polycarbonate technology. Because of this extensive testing, AmeriLux has enhanced the warranty to reflect the product's high performance characteristics.

Q: Is this 20-Year Warranty solely from the manufacturer?

A: No, the warranty is for an additional five years to the already established 15-year limited manufacturer warranty and is the sole liability of AmeriLux International.

Q: What does the 20-Year warranty cover?

A: The extended warranty covers any claims on LEXAN™ THERMOCLEAR™ 15 multiwall polycarbonate products displaying a loss of more than 4% light transmission and a change in the yellowing index of more than 5 units.

materials is important for application success.

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DIY Tip of the Month

Store polycarbonate panels in a cool, dry place out of the direct exposure to sunlight.

Storing panels in direct sunlight can cause the masking to bond to the panel surface, making it difficult to remove.

To also prevent heat buildup, avoid covering the sheets with a dark tarp or some other type of heat absorbing material.

[CLICK HERE TO READ FULL INTERVIEW](#)

Polycarbonate warranties can be confusing and they certainly do not offer an insurance policy for other costs associated with a warranty claim such as labor, disposal, and transportation costs for removing and replacing the materials. If you have any warranty-related questions, please call the AmeriLux Customer Relations Team at 920-336-9300.

For additional polycarbonate warranty information:

- [Click here for a link to the AmeriLux 20-Year Industry Leading Warranty.](#)
- [Click here for a link to the AmeriLux: What is in a Warranty White Paper.](#)

LEXAN THERMOCLEAR is a trademark of SABIC.

Cultivate'15 - Columbus, Ohio

"Largest Horticultural Tradeshow in North America"

Thank you to everyone who came by our booth at Cultivate'15 in Columbus, Ohio. We hope you



enjoyed your time at the trade show and appreciate all those that took the time to stop by and chat. If you missed us at the show and have questions concerning our products and/or services, please feel free to give us a call at 888.602.4441.

Congratulations to Sarah Sallaz, the winner of a Hobby Greenhouse! Thank you to all who participated and signed up for our monthly eNewsletter at the tradeshow.

Polycarbonate Hobby Greenhouse

"Designed for Years of Gardening Enjoyment"

Polycarbonate is a durable greenhouse glazing material - perfect for the ultimate backyard greenhouse. The W606 Walk-In Greenhouse is designed for the home hobbyist. It features high strength, extruded aluminum framing and CoverLite® brand polycarbonate structured sheet glazing panels. These are the same materials commercial greenhouses use in their construction!

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Product Specifications:

- 6'6"W x 7'4"L x 6'6"H (1970 x 2240 x 1970mm)
- One Window
- 4 ft High Side Walls
- 4 mm Multiwall Polycarbonate
- 2 ft Wide Sliding Door
- Galvanized Steel Base is Available

To purchase: Call 888.602.4441 and ask for Jen Hewitt.

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