

# See-through plastic installation guidelines

SEE-THROUGHS

by Tami Churchill Voss

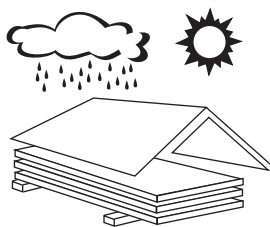
**P**olycarbonate glazing panels are available in many forms, such as multiwall, corrugated and solid sheets. You can always expect high light transmission, light in weight, high flexibility, excellent impact strength, UV protection against yellowing and easy fabrication guidelines from polycarbonate panels. *Tip:* Polycarbonate has an impact strength that is 200 times stronger than glass and 10 times stronger than acrylic.



Coverlite™ solid polycarbonate glazing by AmeriLux International LLC.

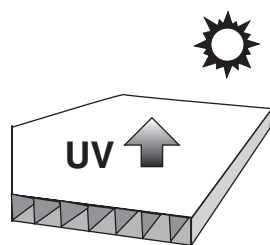
For storing polycarbonate glazing panels at the job site, make sure to keep the sheets in a dry area out of direct sunlight or heat. Exposing the panels to heat from the sun can cause the protective film to adhere to the sheet surface making it difficult to remove. *Tip:* If you are having

Structured polycarbonate sheets must be padded and packaged in good condition during storage and transportation. Protect sheets from direct sunlight and shelter from rain and snow.



trouble peeling off the protective film, wait for the temperature to drop which will cool off the sheet and should make it easier to remove.

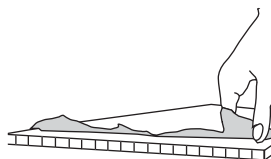
Always remember to make sure the UV protected side of the sheet is facing out on the exterior of the application. Most all of the polycarbonate manufacturers either put a sticker on the UV protected side or they will print it on the protective film masking. *Tip:* If you have removed the film and are not sure which is the exterior side of the panel, take a “black light” in a dark area and shine it on the surfaces of the sheet. The side that glows a bright blue color is your UV protected surface.



The UV-protected side of structured polycarbonate sheet is covered with printed film and must face toward the sun.

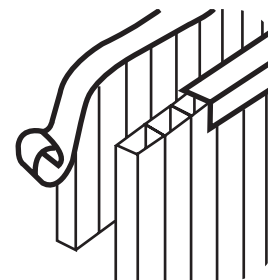
Never remove the entire sheet of protective film from your polycarbonate panel until after installation. The film is put on the polycarbonate to protect it and to identify the UV stabilized side of the sheet. Without the masking, it is very hard to tell which side is the UV protected surface. It is recommended that the film is removed about 2" from the edges around the sheet during installation. Finish with removal of the entire sheet of film immediately after the panel has been installed. *Tip:* Remove the film after each panel is installed, not after the project is completed.

Remove approximately 2" of film from all sheet edges before installing. Remove all film immediately after the panel is installed.



2" from edges

During fabrication and installation, make sure to drill screw holes 5/64" larger than the screw diameter allowing for thermal expansion. This extra space will provide for seasonal temperature fluctuation which causes the sheet to expand and contract. When cutting the polycarbonate panels, use a circular saw with a fine tooth blade (minimum 10 teeth per inch). On thinner gauge sheets, a razor knife can be used to cut the sheet. Remember to cut on both sides of the sheet if you use a razor knife. Always point fasten your sheets at least 1-1/2" in from the sheet edge. On multiwall polycarbonate panels, the ends of the sheet need to be sealed with either a polycarbonate U profile or perforated aluminum tape. Sealing the end of the sheets keeps dirt and debris out of the flutes. *Tip:* Compressed air may be used to clean debris from the flutes.



Structured polycarbonate sheets must always be installed with ribs positioned vertically. Seal ends with perforated aluminum tape and/or a perforated U profile.

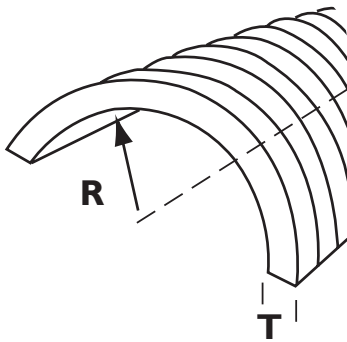


Coverlite™ 16 mm multiwall polycarbonate on the roof and .118 solid polycarbonate glazing on the end walls by AmeriLux International LLC.



Coverlite™ multiwall 16 mm polycarbonate glazing by AmeriLux International LLC covers a residential sun room.

If the application requires bending, polycarbonate can easily be cold formed, thermoformed and vacuum formed. The radius of the curve on cold forming depends on the thickness of your panel. Check with the manufacturer for “minimum bending radius” and forming guidelines. Each polycarbonate panel from solid sheet to multiwall sheet will require slightly different forming guidelines depending on the sheet configuration. *Tip:* On multiwall panels, make sure to place the ribs running the length of the arch, not parallel to the center of the arch.



When cold bending structured polycarbonate sheet, place the ribs following the desired arch. (Do not place the ribs parallel to the center of the arch, shown dashed line.) The radius of the curve must be more than 175 times the sheet thickness. Do not walk on structured polycarbonate sheet at any time.

After installation, panels should be washed. Polycarbonate can scratch easily. Never rub abrasive particles on the sheet surface. Use a mild soap solution with a soft cloth to loosen any dirt or debris and then rinse with clean water. Do not use any harsh chemicals on the sheet surface as it can compromise the integrity of the UV protection and strength of the sheet. Call the manufacturer for a list of chemicals compatible with polycarbonate. *Tip:*

Use mild dishwashing detergent as your cleaning solution.

### Conclusion

Polycarbonate panels in solid, multiwall and corrugated can be used in various applications from interior projects like ceiling panels or office partitions to exterior building materials used in skylights, walkways, greenhouse glazing and insulated roofing. The possibilities for polycarbonate are endless! Make polycarbonate your material of choice on your next glazing project. ■

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