



Polygal Multiwalled Polycarbonate Sheets

Turning Bright Ideas Into Reality

• Design • Glazing • Installation • Storage

Polygal develops and manufactures a full range of Polycarbonate multiwalled sheets which offer superior solutions for an entire spectrum of light-transmitting, heat-controlling applications. Polygal sheets are ideally suited for light-transmitting walls and roofing, skylights, pool enclosures, greenhouses and an endless variety of glazing solutions.

Polygal sheets are creatively used by architects and builders around the world, who appreciate their attractive appearance, versatility, light weight, durability, protection from UV damage and simplicity of installation.

Polygal's Technical Support Department offers architects and builders a wide range of services, including computerized drawings of building details, and assistance in designing with Polygal products, including computing bending and load data.

Polygal Product Range

RFX An exclusive Polygal patent that controls penetration of heat into buildings - more heat in the winter and less in the summer - while allowing transmission of daylight - effectively reduces energy and lighting costs.

PolyShade PolyShade sheets combine effective solar heating control with a highly attractive, metallic look, available in a number of modern color options.

Primalite These new, technically advanced sheets selectively decrease penetration of heat-bearing near-infra-red solar energy, while allowing the visible light wavelengths to penetrate the sheet - more light, less heat!

Titan Twice as strong as standard Polycarbonate sheets, Titan is particularly suited for withstanding heavy loads. Provides solutions in places where others fail.

Standard Sheets Multiwalled Polycarbonate sheets manufactured in a variety of colors and transparency levels - designed for most conventional roofing and glazing applications.

Glazing Systems with Aluminum Profiles Polygal's 6-16mm glazing systems use Polycarbonate sheets, aluminum profiles, and specially fitted screws and EPDM gaskets for easy to install, well-sealed roofing surfaces.

Glazing Systems with Polycarbonate Profiles Polycarbonate profiles and attachment details especially designed for glazing with Polygal's Polycarbonate sheets - ideal for do-it-yourself and greenhouse applications.

TripleClip TripleClip 5/8" system is an advanced and simple do-it-yourself solution for large, flat roofs. TripleClip's modular design, combining Polygal Polycarbonate sheets and aluminum profiles, ensures well-sealed, easy to assemble roof surfaces.



Installation Instructions for Polygal Multiwalled Polycarbonate Sheets

Designing a Structure using Polygal Sheets

The instructions apply to standard Polygal sheets of all widths, as well as the following Polygal specialized sheets: RFX, Titan, PolyShade, Primalite and the TripleClip Glazing System.

1. Avoid flat roofs. Roofs should have a minimum slope of 1:12.
2. Sheets must always be mounted with ribs running vertically on all outdoor applications (see Illustration 1).
3. The length of Polygal sheets is defined as the measure of the sheets in the parallel direction of the ribs, and the width of the sheet as the measure perpendicular to the ribs (see Illustration 2).
4. In order to prevent deflection in the roof, the purlins in the structure should be positioned at a distance recommended by Polygal. This information is available from Polygal's official distributors and Polygal's Technical Support Department.

Cutting the Sheets

Polygal sheets can be cut using any carpentry saw, including a handsaw, circular saw, jigsaw (see Illustration 3) or a sturdy razor knife. All saw blades should have fine teeth with a saw kerf of 0.08"-0.13". Circular saw blades should be two sided with an alternate bevel of 10° and 45°. For thicknesses up to 3/8", a sharp knife can be used. Cuts should be made on both sheet surfaces for a clean cut. Clamp the sheet to the worktable to avoid vibration and rough cutting. All safety precautions should be observed in order to prevent injuries and/or damage to the sheets. Dust can be removed from flutes by applying air pressure from a compressor and/or vacuum cleaner, or ideally by ionized air.

Sawing Recommendations

	Hook Angle	Kerf	Alternate Bevel	Upper Tooth Angle	Cutting Speed	Tooth Spacing
Circular Saw Blades	+5°-+12°	0.08"-0/13"	Two sided 10° and 45°	20°- 40°	590-820 ft/min	1/8"-3/16"
Bandsaw					660-820 ft/min	1/16"-1/8"

*See manufacturer's information online for tooling specifications

Cold Bending

Polygal sheets can be easily sprung into arches with a minimum radius in accordance with the sheet thickness (see Illustration 5.) Arches should always be formed parallel to the sheet ribs. For proper cold bending, sheet length must always be greater than sheet width.

Protective Films

Remove the protective film from the bottom side of the sheet (non-printed film). On the top side, peel the film back at all four edges of the sheet, at a width of about 4" from each side. When the installation is complete, remove the protective film from the top of the sheet. Do not leave any protective film on the sheet after installation is complete!

Sealing

The use of silicone is recommended only for sealing points connecting to the building walls. Proper installation of roofs made of Polygal sheets and profiles does not require use of silicone sealer. To prevent damage to sheets, only use original Polygal Silicone sealer, available from authorized Polygal distributors.

Sheets should be sealed at their upper edge using special, solid anti-dust tape, and at the lower edge using vented tape; sealing tapes are available from authorized Polygal distributors.

Always ensure:

- A minimum roof slope of at least 1:12
- Sheets are installed with the exterior side facing outwards
- Aluminum profiles are carefully attached across their entire length.

