The Art of Light Management

Great artists know how to work with light. Great architects and designers look for the best materials to bring the light into each space so as to create the right atmosphere. Plazit-Polygal produces a range of flexible multi wall thermoplastic sheets that are ideal for many roofing, glazing, skylights, signage and interior design projects. They enable you to manage the available light and provide insulation and UV-protection, as well as adding texture and color to your project.

Our multi wall sheets are constructed from multiple layers of polycarbonate for maximum strength, with an internal cellular structure that makes them light and flexible.

Polycarbonate
Multi Wall Sheets

Features and Benefits

- Excellent insulation
- Controlled daylight transmission
- Virtually unbreakable
- Flexible and easy to install
- Flame retardant
- Lightweight
- UV-blocking
- Environmentally friendly
Agriculture – maximizing natural light and thermo-insulation all year round.

Architecture – lightweight roofing with selective layers for light management.

Decorative – creative design feature with endless color and illumination options.

Signage – lightweight material with optimum light diffusion for lightbox signs.
Polygal **Standard.**
Double and triple-layered Polygal Standard sheets are manufactured in various colors and degrees of transparency. Polygal Standard is designed for use in most conventional roofing and glazing applications.

Polygal **Selectogal.**
An exclusive Polygal patent lets Selectogal (RFX) control the penetration of heat and the transmission of natural daylight into buildings, reducing heating and lighting costs. Selectogal’s sophisticated prismatic structure reflects most of the sun’s heat in the summer and allows increased penetration of solar heat in the winter.

Polygal **Thermogal.**
Thermogal’s unique interior X-brace combines extra strength and rigidity with outstanding insulation. Ideal for low-pitched roofs and for glazing closed structures with large-span openings, Thermogal is available in different thicknesses, widths, and colors.

Polygal **Titan Sky.**
Titan Sky’s internal cross-brace structure gives these sheets twice the strength and rigidity of equivalent standard polycarbonate sheets. Polygal Titan Sky presents an advanced solution that stands up to heavy loads.
# Mechanical and Thermal Properties

<table>
<thead>
<tr>
<th>Product</th>
<th>Structure</th>
<th>Thickness (mm)</th>
<th>Weight (g/m²)</th>
<th>Standard Width (mm)</th>
<th>Standard Bending Radius for Cold Arches (m)</th>
<th>Minimum U-Factor* (W/m²·K)</th>
<th>Light Transmission (%)**</th>
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* ASTM C177 TNO  ** ASTM D1003  *** ASTM D1494

## Available In Standard Colors

- Clear, Ice, Nonglare (NGL), Clear, Ice and NGL
- Blue, Bronze, Gray, Green, Turquoise
- Max. length: in accordance with handling restrictions

## Standard Sheet Length

- 3 m, 4 m, 6 m

## Thermal Expansion

- 2.5 mm/m: Clear, Ice and NGL
- 4.5 mm/m: dark colors

## Service Temp. Range

- -40 - +120 °C
Connection Systems and Accessories

Our interconnecting polycarbonate or aluminum profiles connect multiple multiwall sheets to cover large areas. They add no weight and lie flush with the sheets. They are UV-resistant and provide excellent sealing for roofs and inclined walls, because they do not obstruct light at connection points. Our profiles are available in unlimited lengths, are easy to handle and install, and suit most roofing, curtain wall and cladding applications.

Recommended Uses

Our profiles suit most roofing, curtain wall, and cladding applications.

ECP 2G Polygal System

Connection system for polycarbonate profiles designed to connect multiwall polycarbonate sheets with thicknesses between 4 mm to 10 mm. Profiles can easily be connected together to form reliable joints. Manufactured in all standard colors, in lengths of 6 m or 12 m.

APC 301 Polygal System

Combined connection system consisting of an aluminum base and polycarbonate cap profiles. Designed to connect multiwall polycarbonate sheets with a thicknesses between 6 mm to 16 mm. Provides a rigid connection. Manufactured in all standard colors. Length up to 6 m.

NEW GCP Polygal System

Connection system for polycarbonate profiles with integrated co-extruded gaskets, designed to connect multiwall polycarbonate sheets with thicknesses between 6 mm to 16 mm. Provides a very well sealed connection, manufactured in all standard colors, in lengths of 6 m or 12 m.

MGL Polygal System

Aluminium glazing system designed to connect multiwall polycarbonate sheets with thicknesses between 6 mm to 16 mm. Provides a rigid and sealed connection. Length up to 6 m.
Selective Layers

POLYSHADE A

Designed for warm climates, Polyshade reflects sunlight to prevent excess heat build up for effective control of solar heat.

PRIMALITE B

These unique sheets selectively reflect most of the near-IR solar radiation and transmit more visible light. Available in various colors and degrees of transparency.

SILHOUETTE C

Silhouette, with its sophisticated and lustrous exterior surface, radiates elegance and style and features outstanding reflective qualities and light selectivity. Available in Pearl and Gold.

POLYCOOLITE D

Specifically designed to let in natural light for photosynthesis, Polycoolite blocks harmful UV rays, supplies high blues and reds, and reflects heat from the unused green.

SPRING E

Spring, a transparent sheet with a special co-extrusion layer on the exterior side (under its UV protective layer), blocks invisible IR solar radiation and heat.

RAINBOW F

Special optical effects in Rainbow sheets combine with the angle of light to change the sheet color (for example, from red to green) to harmonize with any setting.

Optical Properties of Selective Layers

<table>
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<tr>
<th>Selective Layer</th>
<th>Structure</th>
<th>Thickness (mm)</th>
<th>Light Trans. (%)</th>
<th>Shading Coefficient</th>
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About Plazit-Polygal

The Plazit Polygal Group is one of the leading international specialist manufacturers of thermoplastic sheets for various applications. Our company is respected worldwide for its innovative and high quality products and expert technical support. Our production facilities are located in Israel, USA, Chile, Bulgaria, Russia and Spain, enabling our clients to source our products close to their locations around the globe.

Both Plazit & Polygal started to manufacture extruded plastic sheets in 1973 – a landmark year for the international plastics industry. Polygal became few years later a pioneer in the production of polycarbonate multi wall sheets. From modest beginnings, both companies have grown and become world leaders in the plastic sheeting market.

Plazit and Polygal merged their operations in 2011, and the Plazit Polygal Group continues to develop its products, production facilities, human resources and market presence. We are committed to meeting the needs of our customers and guaranteeing high quality, flexibility and swift response – these commitments are the key to all our activities.

Plazit Polygal Group facilities are certified according to ISO 9001, ISO 14001, CSTB (France), HACCP, ROHS, fire and health certifications, and other international engineering standards. Our in-house experts provide technical support and continuous product development to meet the evolving needs of our global client base.

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