COMBINING FREEDOM OF DESIGN WITH ENVIRONMENTAL BENEFITS

Turning Polycarbonate into Architecture

New buildings must comply with environmental regulations and energetic efficiency protocols. With the above stipulation in mind, architects and designers need to make use of applicable building materials and architectural solutions to construct and deliver structures that are both outstanding in their appearance and function as well as comply with the most stringent and up to date regulations. Integrating environmental friendly "green" aspects and design considerations is not an easy task. However, polycarbonate (PC) is a material that performs extremely well in both roles.

Polycarbonate is a versatile material which offers architects and builders many possibilities via which they can maximize energy efficiency while providing greater design freedom, enhanced aesthetics and cost reductions. Polycarbonate sheets can provide important sustainability benefits, including reduced greenhouse gas emissions and improved energetic efficiency. They contribute to increased and beneficial daylight exposure as well, while their relatively low weight (compared to glass) reduces transportation costs and CO2 emissions. Additionally, PC sheets assist in reducing resources consumption thanks to their extended lifespan.

How does polycarbonate combine freedom in design with environmental benefits?

Design flexibility

Finding a material that will transform the idea into a reality can be a challenge. Utilizing PC sheets provides wide-ranging design freedom as they can be either cold formed or thermoformed without losing impact or weathering properties. As such, highly complex structures can be made with polycarbonate.

Durability

Polycarbonate sheets have an excellent reputation for maintaining coloring and mechanical strength over time, even in stressful conditions. Multiwall polycarbonate sheet, which is virtually unbreakable – is able to resist hail impact and withstand storm wind loads.

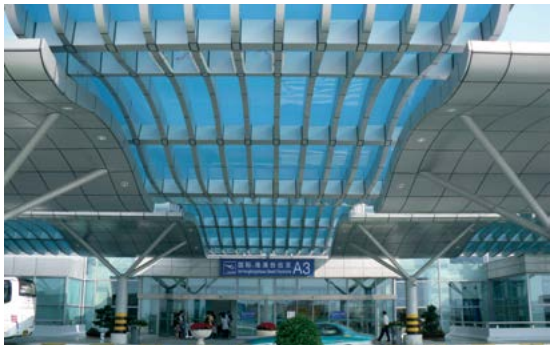
Insulation

Compared with traditional glazing materials, multiwall polycarbonate sheets can deliver exceptional thermal insulation to enhance energy conservation and reduce associated emissions. The Multiwall PC sheet structure creates additional air pockets between the exterior and interior of the building while enhancing structural strength and rigidity. This configuration enables the material to enhance the structure's energetic efficiency year-round while transmitting diffused daylight.

Installation Savings

Construction costs are important considerations and should not to be overlooked. From transport to on site breakage, the financial losses and ecological impacts of glazing installation can rise dramatically if builders specify the wrong material. Polycarbonate sheets offer 50 % weight savings compared to glass of the same thickness. Multiwall sheets deliver even greater weight savings. When compared with 6 mm wired glass, a 10mm multiwall sheet saves more than 85% in the glazing weight alone. Lighter weight leads to significant fuel savings in transportation and makes onsite handling easier.

Polycarbonate is an innovative material which allows architects and builders to create structures that are original, practical, and sustainable. Cost-efficient and flexible in its design capabilities and versatility, the polycarbonate sheet is positioned to meet the demand for energy-efficient buildings. As the next great architectural challenges arrive, so will the increased usage of polycarbonate sheets.



EPSE
an EuPC Sector Group
EUROPEAN POLYCARBONATE SHEET EXTRUDERS

EPSE is a sector group of the European Plastics Converters and represents the 11 major polycarbonate sheet producers manufacturing over 120 000 tonnes of polycarbonate sheets every year, as well as 3 resin producers. EPSE comprises more than 1 000 employees and generates a turnover of over 500 million € per year. Press Contact: Emilia Tarlowska: Communications Officer, EPSE c/o EuPC, Avenue de Cortenbergh 71, 1000 Brussels – Belgium www.epse.org | T: +32 273 96 376 | F: +32 2 732 63 12 | emilia.tarlowska@eupc.org

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