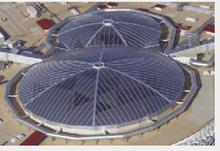
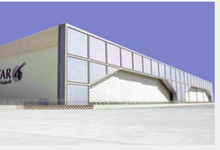




UV TECH

U.V. RADIATION ABSORPTION

Specific UV absorbing additives coextruded into the outer side of the panels to cut off the UV-B and UV-A sections of solar spectrum to prevent polymer damage.

Features and Benefits

Polycarbonate UV stabilized panels with outstanding weathering resistance enabling lifetime extension in outdoor glazing applications...
The measured benefits are:

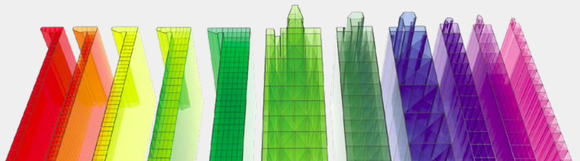
- Panel with overall superior mechanical and aesthetic performance retention
- Very low colour change during service life
- Minimal surface roughness development *(refer to chart)**
- Excellent yellowing resistance after prolonged sun exposure *(refer to chart)**

Performance guaranteed over time

UV- Tech stabilization provides better resistance to atmospheric contaminants than standard polycarbonate panels. It maintains excellent mechanical and aesthetic properties, even after prolonged exposure to solar radiation. Minimal surface degradation results in a low surface roughness that guarantees:

- High level of polycarbonate panel clarity and transparency
- Resistance to dust buildup on panel surface
- Durable self-cleaning under natural rain

Overall UV stabilization treatment allows for a longer lifetime of up to +50% enabling less maintenance costs, better resources utilization and replacement of traditional building materials such as high value glass.



UV TECH

EXTENDED LIFETIME POLYCARBONATE
OUTDOOR SOLAR EXPOSURE
PROTECTIVE TREATMENT

dott.gallina
POLYCARBONATE SYSTEMS & SHEETS

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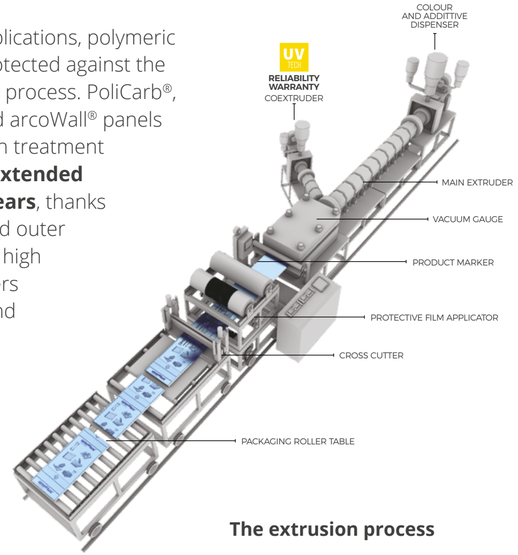
GRAPHIC&DESIGN: PIERPAOLONARDI.COM

UV ABSORBER COEXTRUSION

UV-TECH TREATMENT

Protective coextrusion with UV-Absorbers

For extended lifetime applications, polymeric substrates have to be protected against the natural solar degradation process. PoliCarb®, PoliComp®, arcoPlus® and arcoWall® panels with UV-TECH stabilization treatment are characterized by an **extended warranty of up to 15 years**, thanks to a protective coextruded outer layer, using a selection of high performance UV-absorbers which are highly stable and effective over time

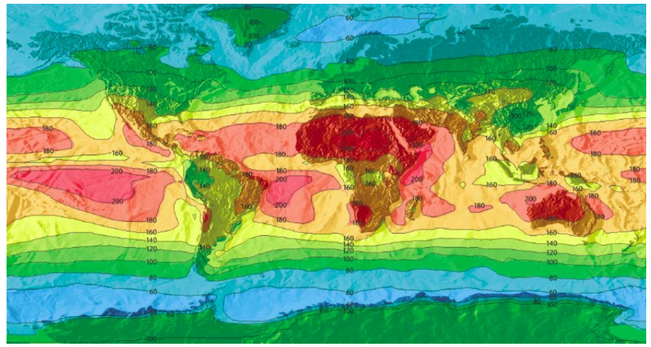


The extrusion process

Dott.Gallina manufacturing is known for its high degree of technical know-how. This has delivered "in house" creation of all production machinery, thus allowing diverse product customization which meets the necessary building and construction regulations.

SOLAR RADIATION

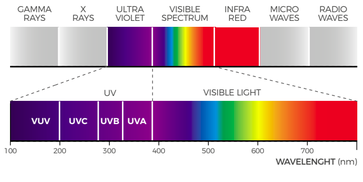
Distribution of solar irradiation according to latitude and season



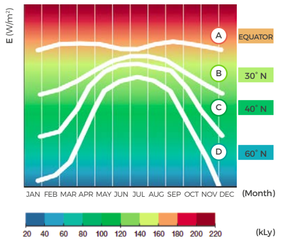
UV Radiation Map Courtesy of BASF

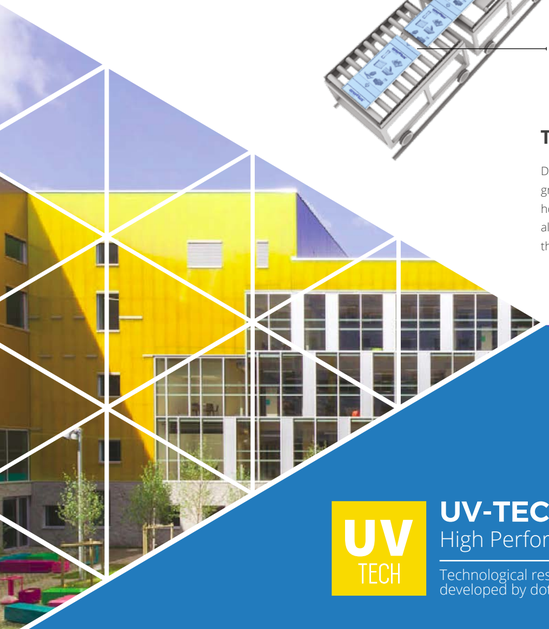
Intensity SPECTRUM at Earth's surface

UV-A and UV-B rays represent only 5% of total solar energy but can cause damage to construction materials such as polymers.



Yearly average solar irradiance





UV-TECH

High Performance polycarbonate sheets

Technological research developed by dott.gallina srl

EXTENDED LIFETIME POLYCARBONATE

OUTDOOR SOLAR EXPOSURE APPLICATIONS

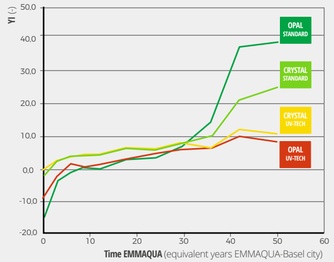
SPECIAL WARRANTY 15 YEARS ON POLYCARBONATE SYSTEMS

EMMAQUA TEST in cooperation with BASF

With a target to confirm weathering resistance close to real life, arcoPlus® samples were exposed in Arizona desert under the EMMAQUA outdoor accelerated weathering protocol for 4 years. Samples were collected on a monthly basis for evaluation to check the aesthetic and mechanical performance. The below charts highlight how UV-TECH stabilization treatment influences polycarbonate panel properties

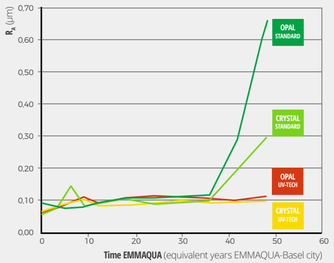
Yellowness index*

Lower yellowness means more transparency, more mechanical resistance and proper cleaning.



Surface roughness*

Lower roughness means more transparency, more mechanical resistance and proper cleaning.



Umbrella metaphor

Just as it's necessary to protect the body using sunscreen, polycarbonate panels need to be protected from solar radiation. An outer layer functionalized with UV absorbers can be compared to the umbrella effect protecting against weathering damage.

Microscopic view of surface