



Gallina USA

industry leaders in multiwall polycarbonate manufacturing

CONDENSATION AND MULTIWALL POLYCARBONATE

Q. Does condensation affect the performance of polycarbonate sheet?

A. In common with many glazing materials polycarbonate sheets can develop condensation as a result of environmental factors. It does not affect the performance of solid or multiwall polycarbonate sheets; the effects are purely visual and normally temporary. At all stages of the handling transporting and installation of multiwall sheets care should be taken to minimize the amount of moisture entering the sheet flutes. Polycarbonate however is hygroscopic, with a 24h water absorption figure of around 0.36% (DIN 53495). To a small degree it is also permeable to water vapor (15g/m³ - DIN 53122). Therefore it is possible that condensation can form within a sheet's structure in spite of all the precautions taken especially where extremes of temperature and humidity occur. Because it is a natural phenomenon condensation is not acknowledged as a fault of the material and is therefore excluded from product performance warranties.

Should condensation form within multiwall polycarbonate sheet it will be exaggerated in the cold wet months, and will diminish during the dry summer months. To aid the dispersal of condensation on warm dry days remove closures or end profiles and unseal the panel edges where possible, allowing air to circulate through the flutes. If this cannot be done in situ then removing the affected panels will be necessary. To accelerate the 'drying out' of a sheet's internal structure, force air through the flutes with a dry compressed air line or similar, before resealing each panel. It may not be practical to employ the methods mentioned in some fabricated systems but if ventilation is allowed the condensation will dissipate. Vented tape will aid in preventing mold buildup.

For additional questions regarding the care of polycarbonate please contact your Gallina representative.

