

Installers Guide to Avoiding Condensation in Multiwall Polycarbonate Roofing Sheet

In this publication we aim to eliminate some of the misconceptions surrounding the phenomenon of condensation within multiwall polycarbonate. Due to the fact that multiwall polycarbonate cannot be totally hermetically sealed, small amounts of condensation may be unavoidable in circumstances. However, experience has taught us that many of the worst cases are invariably due to incorrect installation and / or use of poor quality drip trim.

Factors that lead to the formation of condensation

- ✓ **Drip trim abutment to bar cap, not sealed.**
- ✓ **Drip trim not sealed onto sheet with compatible sealant.**
- ✓ **Poor quality drip trim, which has cracked or warped.**
- ✓ **Filter tape damp before installation. This can be due to sheets being left in a damp storage area, being fitted on a wet day, or left out in the rain.**

How multiwall polycarbonate can be affected

Any of the above factors are likely to bring about condensation in the flute chambers of the roofing sheet. This might be immediately apparent or may take time to appear. Water inside the drip trim or within the roof sheet itself will inevitably result in condensation as soon as the right temperature and humidity conditions arrive.

Filter tape is only designed as an anti-dust membrane and although certain types of breather tape claim to be water repellent, this can be broken down by contact with detergents in cleaning water, causing the material to act like a sponge.

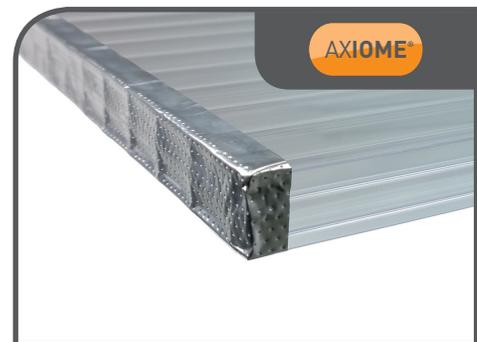
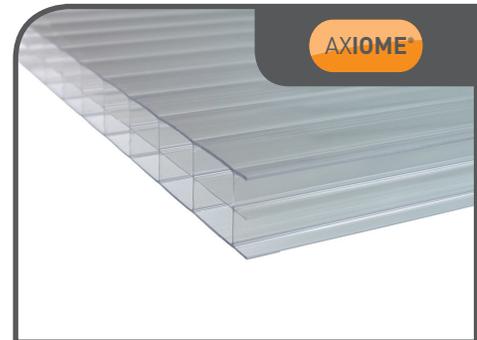
Heat from the sun, or from within the conservatory itself, can evaporate water from damp filter tape or which is lying in the drip trim. The resulting water vapour can re-condense as beads of water further up the flute chambers as soon as a cool enough surface temperature is encountered.

The following page illustrates how to avoid Condensation as far as possible when installing multiwall polycarbonate...

How to minimise the likelihood of condensation

- 1 Make sure that the Axiome multiwall polycarbonate is clean and dry. If there is even small amounts of moisture in or around the sheet this could turn in to condensation once installed.
- 2 Apply the anti-dust filter tape to the end of the sheet. It is critical the anti-dust tape adheres properly to the Axiome multiwall polycarbonate sheet.
- 3 One of the most critical factors is that the drip trim itself should be of a good quality. PVC drip trims will not stand up to the extremes of the elements over time, and will loosen, warp or break, whereas Aluminium drip trims, such as Alukap-XR Endstop Bars, generally offer far greater strength and longevity in almost all situations.
- 4 Using a high quality aluminium Alukap-XR Endstop Bar, push it over the top of the lower end of the Axiome multiwall polycarbonate, only part way on, just beyond the anti-dust filter tape. Then run a continuous bead of quality low-modulus neutral-cure, compatible sealant in front of the upper leading edge of the Alukap-XR Endstop Bar.
- 5 Next, push the Alukap-XR Endstop Bar on further, so that the leading edge rides over the sealant bead forming the best possible water tight seal, but leaving a small four millimetre gap between the face of the anti-dust filter tape and the inside face of the Alukap-XR Endstop Bar.
- 6 Finally, the joints between the Alukap-XR Endstop Bar adjoining glazing caps must be sealed with a quality low-modulus neutral-cure compatible sealant, to ensure that no water can enter the end of the trim. Each length of Alukap-XR Endstop Bar should have been cut to the correct length and angle so that there is no gap between it and the glazing caps either side.

Note: The advice given above is intended to assist installers in avoiding problems of condensation in the first place. In cases where remedial work is needed, it is essential that the roof sheets are thoroughly dried out before attempting any re-installation. This can rarely be done properly on site, as it may take some time



Disclaimer

As we cannot control the circumstances in which Axiome multiwall polycarbonate sheet is transported, stored after despatch from our warehouse, installed, or the installation conditions, Clear Amber cannot be held responsible in any way for condensation problems that may arise or, any associated remedial work. Therefore, all technical and practical advice is offered in good faith and installers should apply the best possible practice before and during installation.