



### Planning the Supporting Structure

- Install the sheets with the flutes parallel to rain flow and with a minimum pitch of at least 5°, we recommend 10°. In roof and wall type applications always ensure that the flutes are positioned vertically.
- Supporting beams must be at least 30mm wide to ensure good stability of sheets and fastening accessories.
- Twinwall sheets should normally be fixed to rafters, purlins or studs at a maximum of 610mm centres. In areas exposed to high wind areas, spacing should be reduced to 400mm centres.
- For an arched/curved structure, ensure it meets the required cold bending radius - 6mm = 1050mm and 8mm = 1400mm.
- It is important that all Building Regulations are met and/or a qualified professional/builder checks and approves the structure before installing Twinwall.

### Preparing the Supporting Structure

- Complete all the metal/timber work and painting before installation of Twinwall sheets.
- Check dimensions on site, and plan the roofing requirements before ordering Polygal products for the project.

### Preparing the Sheets

- Use a Stanley knife, saw or circular blade to cut the Twinwall sheets to desired length and width. When cutting the width of Twinwall sheets, ensure you cut down the middle of the flute to keep the flutes sealed.

Note: Twinwall sheets will expand and contract (approx 3-5mm in length and 2mm in width)

- Fold back the printed sheet protection film 100mm on each side.
- Attach Twinwall Anti-Dust Tape to the bottom (breathable tape) and top (solid tape) ends of the sheets.

Note: It is essential to use Polycarbonate End Caps in conjunction with the Twinwall Anti-Dust Tape to prevent the adhesive in the tape from drying up (unless tape is encapsulated by a glazing system).

### Preparing the Polygal Profiles, End Caps & "F" Sections (Side Profile)

- Use a Stanley knife, saw or circular blade to cut the Polycarbonate Profiles into sections matching the length of sheets.
- Note: Profiles will expand and contract (approx 3-5mm in length and 2mm in width). If cutting sheets with a circular saw, ensure the flutes of the sheets are clear of saw dust (air gun is the ideal method).
- Use Polycarbonate End Caps to protect both the upper and lower edge of the sheets.
- Use a Stanley knife or saw to cut the Polycarbonate End Caps into sections matching the width of sheets.
- Fix the Polycarbonate End Caps to the sheet with the short side on top of the sheet - Do not fix the Polycarbonate End Cap flush with the Twinwall sheets, ensure you allow a 2-3mm gap to prevent condensation.
- Use a metal saw to cut the "F" Sections (Side Profiles) into sections matching the length of sheets. The "F" Sections (Side Profiles) are to finish off the ends of your roof/wall if applicable.

Note: "F" Sections can be installed with blade facing upwards or downwards depending on flashing requirements.

### Sheets Installation

1. Place the sheets with the printed film upwards.
2. Slide the Base Profile underneath the sheet flank and use self drilling screws to secure Base Profile to the structure. The Base Profile should be fixed at every 400mm into the rafter or every purlin intersection. Note: At least one rib of the Twinwall sheet is captured in the Profile.
3. Position the Top Profile in place and use a rubber mallet to connect the Base Profile.
4. Continue to add sheets and profiles until your roof/wall is complete and remove protective film from the Twinwall sheets.
5. Fix the Twinwall sheets at every 400mm with Twinwall Fixings through the rafters or purlins that do not have a Polygal Profile and every 300mm for the bottom end near the gutter.

### Finishing & Fixing Reinforcements

- Place fixing screws with fixing gaskets only in the support frame lines.
- When drilling holes through the sheet, allow for thermal expansion (approx 2mm larger than shaft of screws).
- To ensure a weather-tight seal, the fixings will need to be fixed in perpendicular to the sheet.
- Do not over-tighten screws.

