



26' GROWING DOME TAPING THE SEAMS

TAPING THE DOME SEAMS

Your Growing Dome® will come with aircraft tape. The aircraft tape is very strong and long lasting. Its life is from 5 to 10 years and can be reapplied as required. Ideal taping condition is when the temperature is between 70° F and 100° F and the glazing is perfectly dry. Attempting to apply tape if the temperature is lower than 50° F is not recommended as the adhesive on the tape is too cold to adhere to anything. This tape is expensive. You don't want to waste it. For temperatures between 50° F and 70° F, we would prefer you wait until it's warmer, but if you can't wait, we recommend the use of a hair drier to preheat the tape and the glazing. Don't tape when the day is windy or dusty or threatening to rain, as any dust or moisture at all will prevent the tape from sticking properly. When first installed, the dome glazing is very electrostatic and attracts dust. Avoid touching the sticky side of the tape as this also will prevent proper adhesion. To best separate the tape from the white backing paper, hold the tape so that the paper backing side is towards you. Peel back a corner toward you, and then separate the tape from the paper. Unpeel the backing as you go.

Always wipe glazing joints to be taped with a clean cotton rag and isopropyl alcohol first and allow to dry completely. The alcohol will also remove the black dots in the corners of the polycarbonate. It is best to clean the joints as you go since the static electricity will be constantly attracting dust. Tape should be rolled firmly with the roller provided to further adhere tape to the glazing. This should be done as soon as the tape is applied with special attention to the screw heads. The tape is very strong and elastic and can be cut most easily with scissors or a sharp knife. Make sure the tape covers not only the seams between the glazing panels but also the screws attaching the glazing. Where the layers of tape cross over each other, often a minute capillary gap is created which potentially lets through dust and rain. This minute gap can be avoided by pressing down the overlapping tape with a fingernail or a blunt instrument, such as a screwdriver. If the tape does not go over both screws, it is customary to cut a small square of tape to put over the head of the screw that is not covered by the strip of tape.

Using the paper model and "Taping the Seams" Video 13-V1, identify the major continuous strut lines or what we refer to as "eyebrows". The taping should start with the major "eyebrows" at the bottom edge of the dome and go completely over the top to the bottom of the other side of the dome. The "lower eyebrow" can usually be done without ladders. When working with the "middle eyebrow", two people with a ladder each passing the tape to each other is the best method. When working on the top pentagon, it works best if there are two people, one on the top of the dome (very safe if you keep your weight over the struts – assuming you weigh less than 200 lbs.) and the other at the bottom. Be aware that shoes will scratch the surface of the glazing. (Make sure to get the bottom of your shoes as clean as possible before climbing on to the polycarbonate.) An extension ladder can assist the person on the bottom hand the tape to the person on the top. Make sure the ladder does not scratch the glazing. Also, remember to clean the glazing surface with the isopropyl alcohol as you tape and roll the tape firmly as soon as the tape is applied. Another method is to tape the bottom of the dome separately from the top and overlap the tape joints. Start with the bottom first so the tape overlaps and does not create an edge for moisture to sneak under. There will be a few seams that are not part of any "eyebrow" and will need to be taped separately using this method.

Taping the vents should be done independently after all the other seams have been taped. If the hinge side of a vent is on an "eyebrow", end the tape and start it again on the other side of the vent.

The aircraft tape stretches. A little stretch is fine, too much is not! Don't stretch the tape too tight especially where the screws dimple the glazing strongly or else the tape will tend to pull away from the glazing creating a potential source of leakage. See Video 13-V1 for visuals on taping.

TAPING THE VENT HINGE SIDE

Taping the vents should happen after the rest of the dome tape has been applied with the vents completely closed, preferably disabled. See "Taping the Vents" Video 13-V2 for visual on this. Begin at one side of the vent and attach the tape on the glazing about 3" to the side of the rainshed. Run the tape onto the hinge edge of the

rainshed metal (the very narrow end edge of the rainshed and where the hinges attach to the metal). Once past the rainshed, bring the tape up and on to the front edge of the vent metal overlapping the metal by no more than 1/4", while also keeping it attached to the hinge edge. Continue across the metal until you get to the rainshed on the far side and move the tape back down to only the hinge edge including the top narrow edge of the rainshed to the glazing and then finish off with another 3" on the glazing. Secure the upper side of the tape on the glazing, being sure not to pull it too tight, as the vent should still move freely after taping. See "Taping the Vents" Diagram 13-D1. Make sure the tape also covers the screw heads completely. If not, add additional tape. You may then run a piece of tape on the rainshed, in line with the rainshed, over the hinge edge to the glazing above the hinge, as if the rainshed continued beyond the edge of the vent. Be sure to use the roller over the tape on the polycarbonate and the metal of the vent. Repeat for rainshed on other side of vent.

When taping the hinge side of the top vent, a potential leakage point is created where the two pieces of tape meet at the rainshed. This can be avoided using a small amount of silicone caulk to fill the gap.

Where the 2 "A" vents meet at the top, a piece of tape with slack (so it doesn't pull when both are open) attached to both rainsheds can help reduce leaks at this junction, and/or a piece of tape between the 2 pieces of side C-channel. Some dome owners have cut a narrower or hourglass shape piece cut to fit. See "Taping the Vents" Diagram 13-D1 for a detail showing this.