INSTALLATION GUIDE FOR TAPES

GORE® SKYFLEX® Aerospace Materials effectively seal panels and protect against corrosion by minimizing damage caused by vibration and other mechanical forces. They can be installed more efficiently than other materials because they do not require cure time, and they simplify maintenance because the panels can be easily removed for inspection.

In addition, these materials remain flexible and compliant over multiple open/close cycles, while retaining all of the benefits and features that are critical to ensure the integrity of the application.

Instructional videos are available at: **www.gore.com/ skyflex**.

Preparing the Panel

1. Complete any priming, painting, or treating of the surface prior to installing GORE® SKYFLEX® Aerospace Materials.

2. Place the panel on a flat surface to allow free access to all edges.

3. Remove all old tape or other sealing material, and inspect the panel edges to ensure they are not damaged or delaminated. Check your aircraft maintenance manual for guidelines on panel inspection and maintenance.

4. Clean the panel with an appropriate cleaner, such as isopropyl alcohol, and a cloth. Follow your aircraft maintenance manual requirements or company procedures when selecting solvents for removal of existing sealants (Figure 1).

Figure 1: Cleaning the surface

Together, improving life

Installing the Flat Tape

1. Check the shelf life and part number of GORE®
   SKYFLEX® Aerospace Materials to ensure that it has
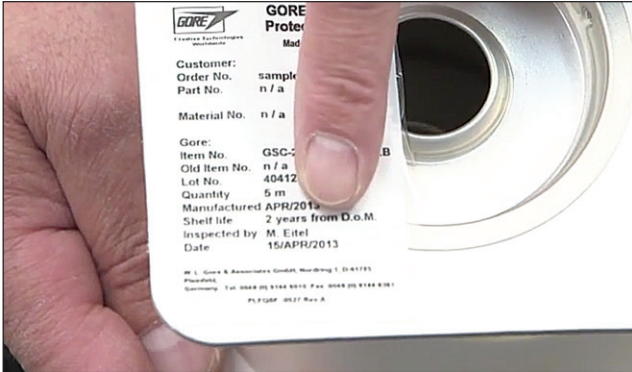   not expired and that you are using the proper tape
   (Figure 2).

Figure 2: Verifying the shelf life and part number

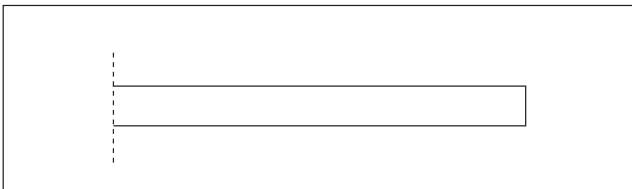2. Cut the tape from the roll at a 90° angle (Figure 3).

Figure 3: Cutting the tape edge

3. Beginning near but not on a fastener hole, lay the
   tape flat without stretching it, and carefully peel
   off the pressuresensitive adhesive liner. Apply light
   pressure to the tape, ensuring there are no creases
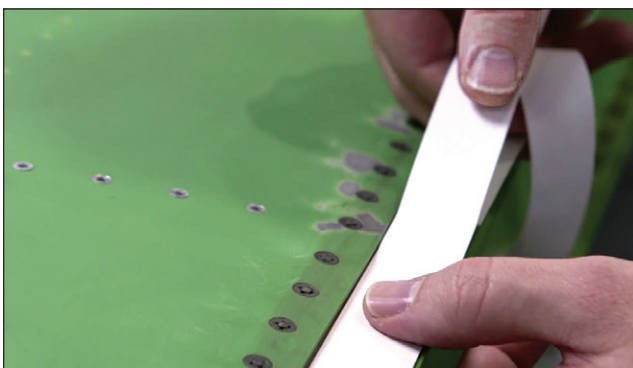   (Figures 4 and 5).

Figure 4: Positioning tape on panel

Figure 5: Positioning tape on frame

4. Using light pressure, press the tape along the
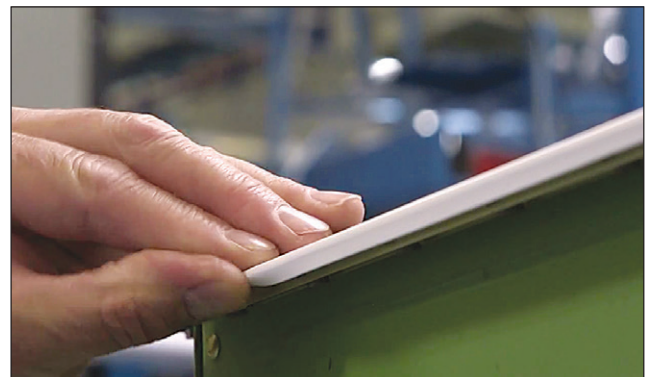   bottom edge of the panel (Figure 6).

Figure 6: Adhering tape to bottom

5. Ensure all edges are wrapped to prevent the tape
   from lifting and to avoid damage to the panel edge.
   Refer to your aircraft maintenance manual to verify
   whether you can cut off excess materials along a
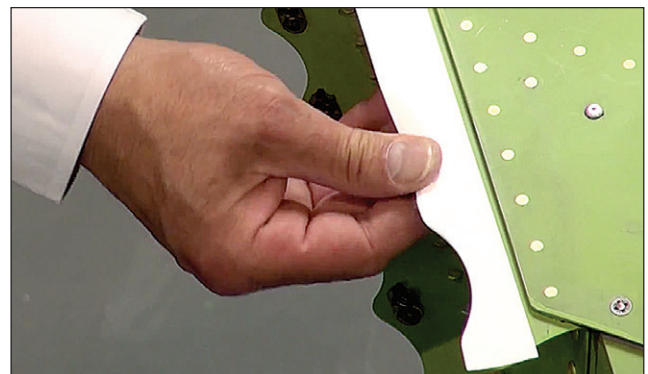   curved edge (Figure 7).

Figure 7: Adhering tape along curved edge

6. When forming a curve, press the tape along the longest edge of the curve without stretching it. Peel off the pressuresensitive adhesive liner carefully (Figures 8 and 9).
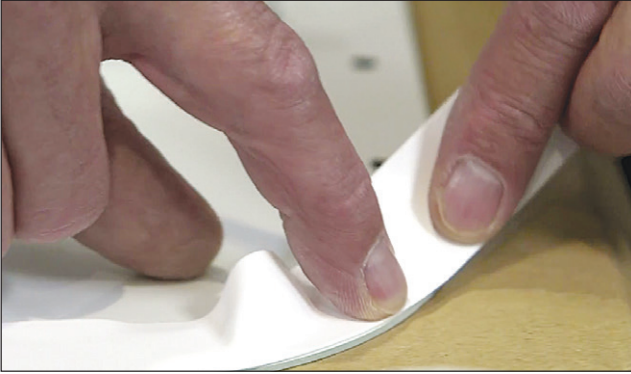

Figure 8: Forming a curve around panel

Figure 9: Forming a curve around frame

7. To seal the tape around a curve, apply light pressure and wrap the excess tape around the short edge, ensuring the edge of the tape is properly sealed (Figure 10).

Figure 10: Wrapping the tape around curve

8. To trim the tape and create a seal around a curve:

   a. Pinch the tape together at a 45° angle to the corner (Figure 11).

   b. Lay the panel flat and cut off the excess tape above the curve (Figure 12).

   c. Align the edges and apply light pressure, ensuring both edges of the tape are properly sealed (Figure 13).
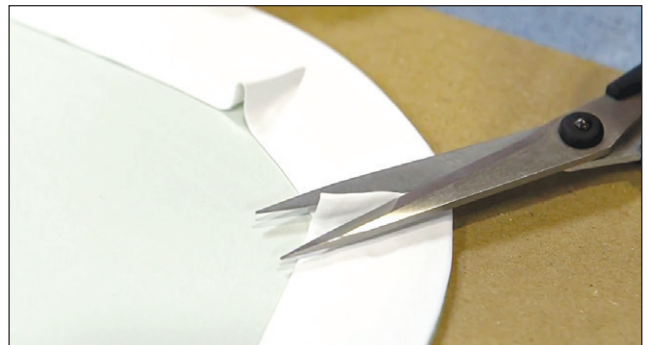

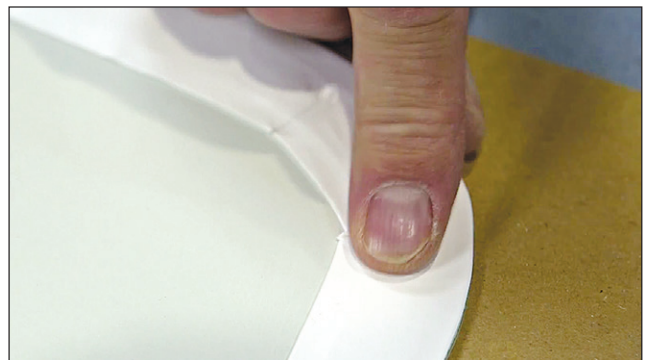Figure 11: Pinching the tape

Figure 12: Cutting the excess tape

Figure 13: Sealing the tape around curve

Installing the Flat Tape (continued)

9. To seal the tape around a corner:

   a. Pinch the tape together at a 45° angle to the corner.

   b. Lay the panel flat and cut off the excess tape approximately 5–10 millimeters above the joint.

   c. Apply light pressure to the overlap, ensuring both edges of the tape are properly sealed (Figure 14).
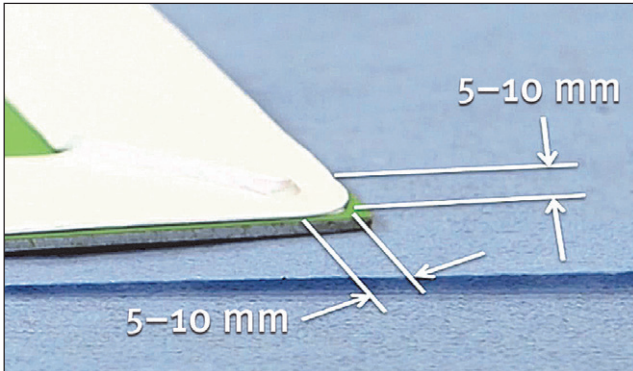

Figure 14: Sealing the tape around corner

10. If a joint is required to create a seal with the tape, overlap the two ends of the tape at the corner (Figure 15). Follow your aircraft maintenance manual for the required measurement to overlap. Apply light pressure to the overlap, ensuring both edges of the tape are properly sealed.

Figure 15: Sealing the two ends of the tape

11. To join the beginning and end, lay the two edges of the tape away from the fastener hole so they overlap between 3–5 millimeters. Follow your aircraft maintenance manual for the required length. Apply light pressure to the overlap, ensuring both edges of the tape are properly sealed (Figure 16).
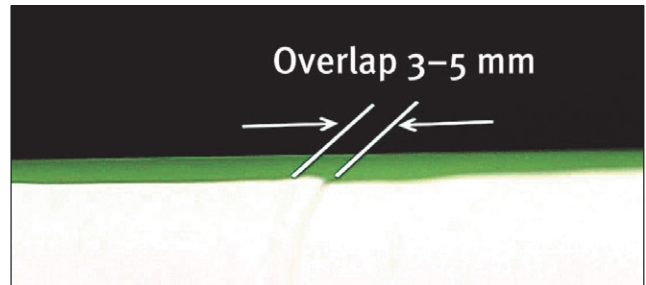

Figure 16: Adhering the two edges of the tape

12. The overlapped tape should be compressed with scissors. (Figure 17).
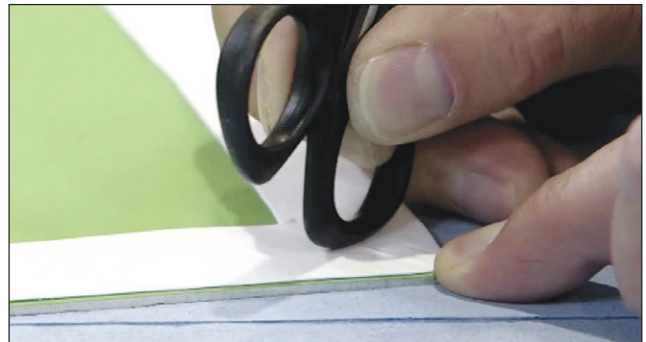

Figure 17: Overlapping of the tape

13. Use an awl or scribe to form the opening for each fastener. Slowly puncture the tape, being careful not to damage the aircraft or surface coatings (Figure 18).

Figure 18: Forming a fastener opening

Installing the Ribbed Tape

1. Check the shelf life and part number of GORE® SKYFLEX® Aerospace Materials to ensure that it has not expired and that you are using the proper tape (Figure 19).

Figure 19: Verifying the shelf life and part number

2. Cut the tape from the roll at a 90° angle (Figure 20).

Figure 20: Cutting the tape edge

3. Beginning near but not on a fastener hole, lay the tape flat without stretching it, and peel off the pressure-sensitive adhesive liner carefully. Align the large rib of the tape to the edge (Figure 21). Apply light pressure to the tape, ensuring there are no creases (Figure 22).

Figure 21: Positioning tape on panel edge

Figure 22: Positioning tape on frame

4. Ensure all edges are wrapped to prevent the tape from lifting and to avoid damage to the panel edge. Refer to your aircraft maintenance manual to verify whether you can cut off excess materials along a curved edge (Figure 23).

Figure 23: Wrapping tape along edges

5. When forming a curve, press the tape along the longest edge of the curve without stretching it. Peel off the pressure-sensitive adhesive liner carefully (Figure 24).

Figure 24: Forming a curve

Installing the Ribbed Tape (continued)

6. To join the beginning and end, lay the two edges of the tape away from the fastener hole so they overlap each other by 5 millimeters and align the ribs. However, follow your aircraft maintenance manual for the required length. Apply light pressure to the overlap, ensuring both edges of the tape are properly sealed (Figure 25).
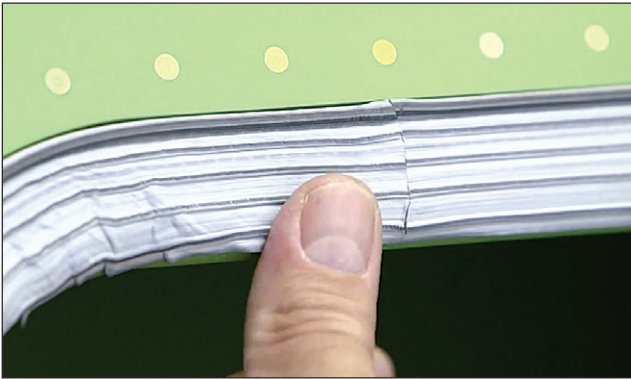

Figure 25: Adhering the two edges of the tape

7. To seal the tape around a curve:

   a. Apply light pressure and wrap the excess tape around the short edge, ensuring the edge of the tape is properly sealed (Figure 26).

   b. Cut off the excess tape around the short edge without damaging the aircraft or surface coatings (Figure 27).

   c. Apply light pressure, ensuring the edge of the tape is properly sealed.

   d. Ensure there are no folds or creases in the tape left after forming the curve.

Figure 26: Wrapping the tape around a curve

Figure 27: Trimming the tape around a curve

8. When forming a corner, wrap the tape around the corner, gently pulling the excess tape to the center (Figure 28).
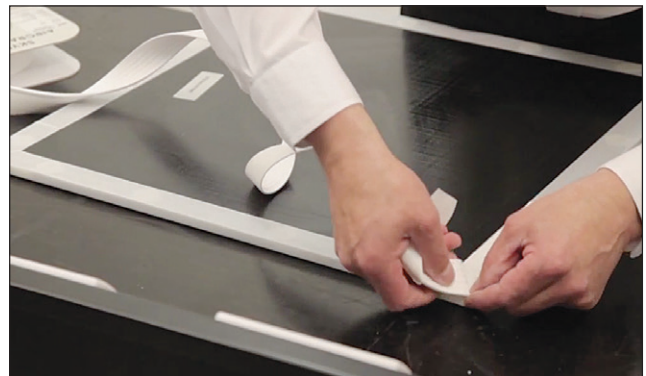

Figure 28: Forming the corner

9. To seal the tape around a corner:

   a. Pinch the tape together at a 45° angle to the corner, ensuring the first two ribs of the tape are attached firmly to the panel (Figure 29).

   b. To seal the corner, lay the panel flat and trim the excess tape approximately 2 mm above the joint. (Figure 30).

   c. Separate the two pieces of the joint. Create an overlap by folding one end over the other while aligning the ribs. Apply light pressure to the overlap, ensuring both ends of the joint are properly sealed (Figure 31).

   d. Check to ensure that the seal continues around the top of the corner by at least 5 mm with at least one rib uncut (Figure 32).

Installing the Ribbed Tape (continued)
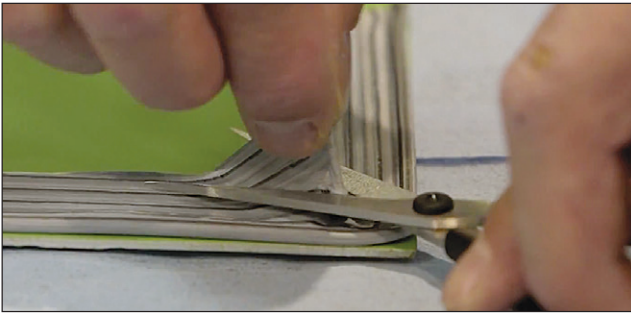

Figure 29: Pinching the corner
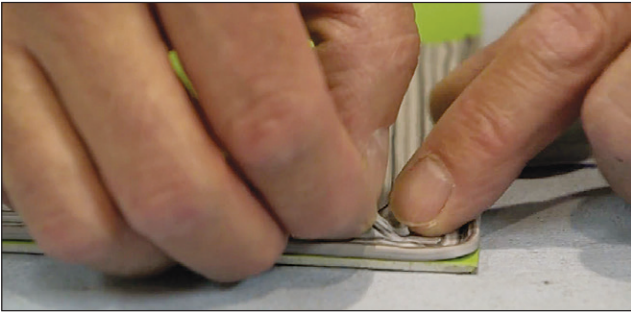

Figure 30: Trimming the excess tape

Figure 31: Overlapping the tape

Figure 32: Continuous seal around the top of the corner

10. If a joint is required to create a seal with the tape:

   a. Position the two ends of the tape at the corner: (Figure 33).

Figure 33: Positioning the tape

   b. Pull the two ends back slightly. Cut one end of the tape carefully at a 45° angle at the corner, and remove the excess tape (Figure 34). Apply light pressure to ensure the tape is properly sealed.

Figure 34: Cutting the tape

Installing the Ribbed Tape (continued)

c. Cut the other end of the tape carefully at a 45° angle, allowing for an overlap of 3–5 millimetres (Figure 35). Follow your aircraft maintenance manual for the required measurement to overlap. Fold the tape over the other end, and align the ribs to create an overlap.
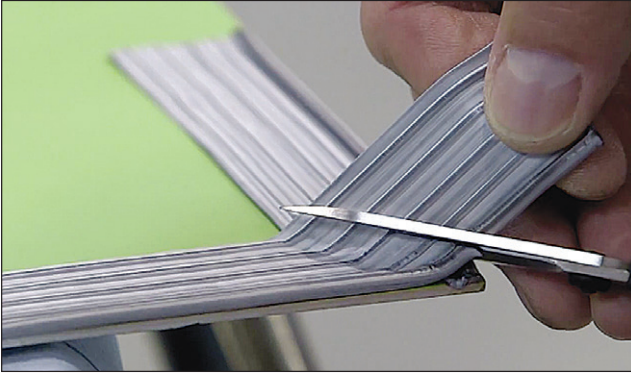

Figure 35: Overlapping the tape

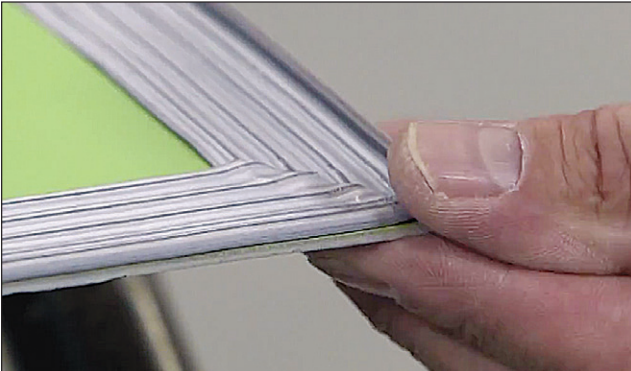d. Apply light pressure to the overlap, ensuring both edges of the tape are properly sealed (Figure 36).

Figure 36: Sealing the two ends of the tape

11. Use an awl or scribe to form the opening for each fastener. Slowly puncture the tape, being careful not to damage the aircraft or surface coatings (Figure 37).
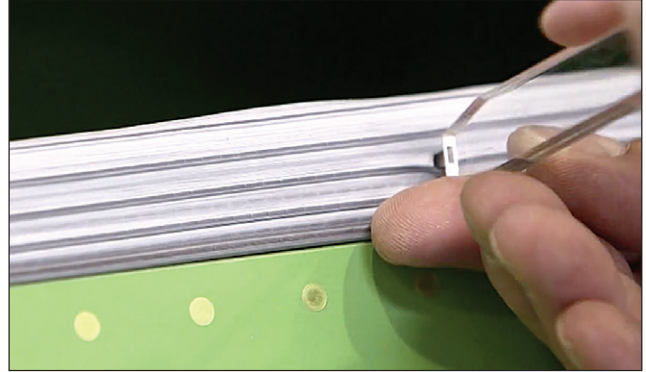

Figure 37: Forming a fastener opening