



3M™ Polyurethane Protective Tape 8730HT Application, Repair and Removal Instructions

Technical Bulletin

December 2010

Application Instructions

Preparation:

The performance of 3M™ Polyurethane Protective Tape 8730HT as a rain erosion and/or sand erosion protective barrier is very much dependent on the surface to which the tape is applied. The surface should be in a “smooth” and “clean” condition. Paint that has chips or other defects should be sanded to feather all edges so that a smooth, void free surface is obtained. Follow the guidelines of the corrosion manual for what coating must be in place on the aircraft surface prior to protective tape installation.

NOTE: Paint must be fully cured before applying 3M 8730HT Tape. Allow paint to dry for a minimum of 48 hours @ 72°F before application.

NOTE: If the leading edge paint is extremely eroded, the surface should be repainted and cured for 48 hours prior to 3M 8730HT Tape installation.

NOTE: 3M 8730HT Tape can be applied when the air and application temperatures are above 60°F (16°C).

NOTE: Installation of 3M 8730HT Tape should be accomplished inside a hangar, not on the flight line in direct sunlight.

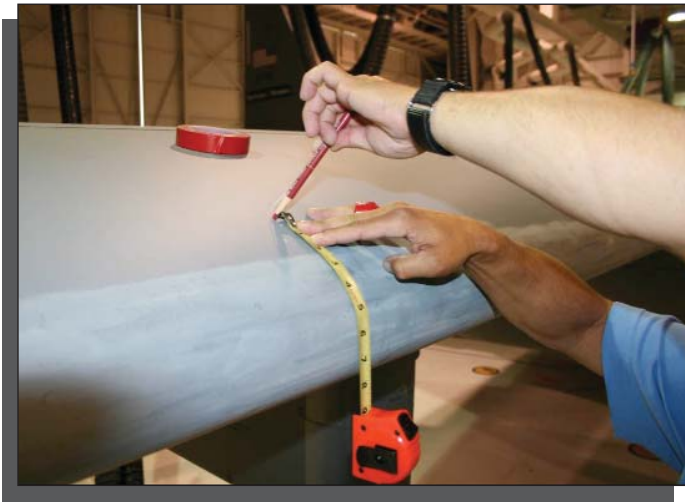
List of Materials Needed:

- 3M™ Polyurethane Protective Tape 8730HT
- Orbital Sander
- 280 and 320 grit sandpaper
- 3M™ Protective Tape Application Solution
- 3M™ Vinyl Tape 471 (1" width)
- Grease Pencil
- Isopropyl Alcohol
- Respirator
- Squeegee
- Clean rags
- Lint Free Cloths
- Scissors
- Tape measure
- Razor blades
- Nitrile gloves
- 3M Air Release Tool

For additional information 3M™ Polyurethane Protective Tape, please see the technical datasheet or product sell sheet available on www.3M.com

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin



Application Steps:

- 1.) Define the area to which the 3M™ Polyurethane Protective Tape 8730HT will be applied. (**NOTE:** for use on the C-130, it is recommended to use a width of 12 inches.) Using a grease pencil, make a mark 6 inches up from the center of the leading edge and 6 inches down from the center of the leading edge. Using these marks, apply a length of 3M™ Vinyl Tape 471 from the root to the tip span-wise. This creates a straight line that will be used as a guide in sanding.



(Top side of wing)



(Underside of wing)

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin



Application Steps (*continued*)

- 2.) Using an orbital sander, sand the defined area first with 280 grit sandpaper, then follow up with 320 grit sandpaper. Paint that has chips or other defects should be thoroughly sanded to feather all edges so that a smooth, void free surface is obtained.

NOTE: Hand sanding will not get the leading edge smooth enough. If the leading edge is not smooth enough, the 3M™ Polyurethane Protective Tape 8730HT may not provide the desired performance. The sanded surface must have a surface roughness value (R_a) of less than 50 microinches (this will feel smooth like a piece of paper) before the tape can be installed.



- 3.) Clean the leading edge by first blowing off the dust. Then, use clean cloths saturated with isopropyl alcohol* or 3M™ Protective Tape Application Solution to thoroughly clean the area of dust and other contaminants. **Do not use treated shop towels.**

***Note:** When using solvents, extinguish all ignition sources including pilot lights, read and follow manufacturer's precautions and directions for use.

***Note:** Consult local air quality regulations before using 3M Protective Tape Application Solution.



- 4.) Measure the length of the leading edge section (between screw heads) to be covered with 3M 8730HT Tape. Cut a piece of tape to the measured length and round the corners to prevent edge lift of the tape.

NOTE: Do not apply 3M 8730HT Tape over screw heads or seams.

NOTE: Prior to handling 3M 8730HT Tape, hands should be thoroughly cleaned to prevent contamination of the adhesive with oils, solvents, or debris.

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin



Application Steps (*continued*)

- 5.) 3M™ Polyurethane Protective Tape 8730HT is applied with the aid of 3M™ Protective Tape Application Solution. Saturate a lint free cloth with 3M Protective Tape Application Solution. Wipe the saturated lint free cloth on the leading edge, leaving behind a thin wet film.

NOTE: Consult local air quality regulations before using 3M™ Protective Tape Application Solution.

NOTE: Applying 3M 8730HT Tape by spraying the 3M Protective Tape Application Solution directly on the leading edge could result in trapped liquid under the tape, impacting the performance of the 3M 8730HT Tape.

- 6.) Remove the first piece of skip slit liner along the top edge of the 3M 8730HT Tape. Place the 3M 8730HT Tape into position under and in alignment with the 3M™ Vinyl Tape 471 on the topside of the leading edge. Using a vinyl squeegee, firmly squeegee the 3M 8730HT Tape into place.

NOTE: Do not stretch the 3M 8730HT Tape while installing it.



3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin



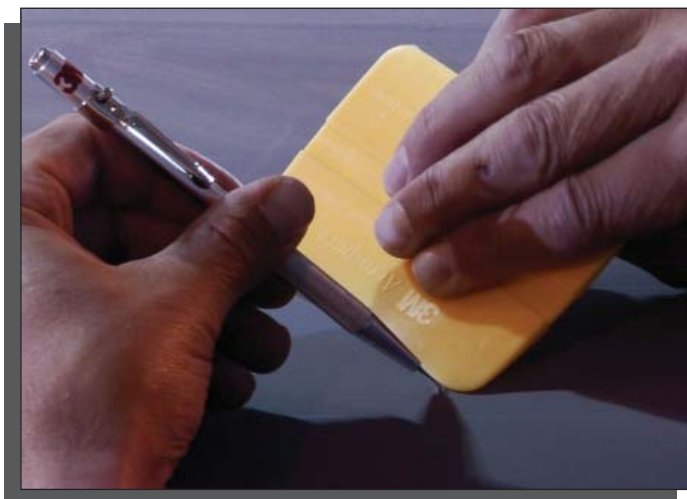
Application Steps (*continued*)

7.) Wipe the leading edge underneath the 3M 8730HT Tape with the lint free cloth, saturated with 3M™ Protective Tape Application Solution. Remove the next piece of skip slit liner and firmly squeegee into place by working in a downward motion along the length of the tape.

8.) An assistant may be helpful in this step to keep the forward edge of the 3M™ Polyurethane Protective Tape 8730HT up to prevent it from sticking down prematurely and causing air bubbles from being entrapped.



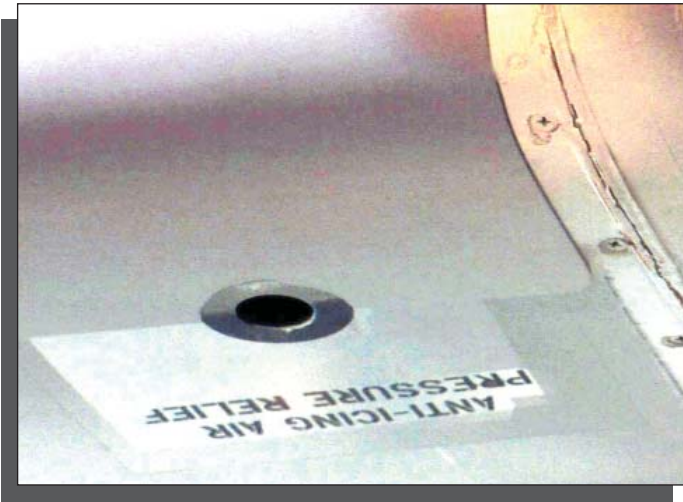
9.) Continue to follow the instructions in Step #7, working down the tape, one skip slit at a time, until the entire piece of 3M 8730HT Tape is installed.



If an air bubble or wrinkle is found, carefully lift the tape up to that point, remove the bubble or wrinkle and reapply the tape. If you cannot reach the bubble by lifting the tape, puncture the bubble with a 3M™ Air Release Tool and squeegee the tape down to force all of the air out.

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin



Application Steps (*continued*)

NOTE: A small section of tape needs to be cut out from the bottom side of the wing tip at the Anti-Icing Pressure Relief Port.

- 10.) Remove the 3M™ Vinyl Tape 471.

NOTE: The black ice indication patches vary in length. Do not cut the tape before measuring. This is also applicable to the grey section of tape directly inboard of the black ice indication patch.

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin

Repair Instructions

There are two repair procedure options if the 3M 8730HT Tape becomes significantly damaged:

Option 1

1. Remove the damaged area of 3M 8730HT Tape.
2. Sand and clean the leading edge surface per the instructions laid out in the Application Instructions.
3. Cut a piece of 3M 8730HT Tape to fit in the area leaving 1/8" gap between the new patch and the existing tape.
4. Install the new patch of 3M 8730HT Tape per the instructions laid out Application Instructions.
5. Fill the 1/8" gap with 3M™ Scotch-Weld™ Epoxy Adhesive DP190 Gray to seal the new patch in place.

Option 2

1. Remove the damaged area of 3M 8730HT Tape.
2. Sand and clean the leading edge surface per the instructions laid out in Application Instructions.
3. Cut a piece of 3M 8730HT Tape that is 1/4" larger than the damaged area removed.
4. Install the new patch of 3M 8730HT Tape per the instructions laid out in Application Instructions.
The new piece of 3M 8730HT Tape should overlap the damaged area that was removed by a 1/4" all the way around
5. Edge seal the new patch with Scotch-Weld DP190 Adhesive.

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin

Removal

There are two recommended ways to remove 3M™ Polyurethane Protective Tape 8730HT.

- 1) **Physically pull 3M 8730HT Tape** off by picking up an edge and pulling the tape off the structure at a 90° angle. Adhesive residue left on the surface may be removed with 3M™ Citrus Base Cleaner or isopropyl alcohol* and Scotch-Brite® abrasive pads. Cheesecloth may also be used with isopropyl alcohol to remove adhesive residue.
- 2) A **wallpaper steamer** may be used to remove 3M 8730HT Tape by directing a jet of low-pressure steam from a wallpaper steamer at the peel point of the tape and sealant. Use of a plastic scraper or squeegee will aid in removal. If there is any adhesive residue remaining on the surface, it can be removed using 3M Citrus Base Cleaner or isopropyl alcohol* with Scotch-Brite abrasive pads or cheesecloth.

***Note:** When using solvents, extinguish all ignition sources including pilot lights, read and follow manufacturer's precautions and directions for use.

***Note:** Consult local air quality regulations before using 3M™ Citrus Base Cleaner or isopropyl alcohol.

3M™ Polyurethane Protective Tape 8730HT

Technical Bulletin

Safety and Regulatory

- 3M™ Polyurethane Protective Tape is **100%** solids and contains no hazardous air pollutants (HAPs) or volatile organic components (VOCs). Respiratory protection is not required under normal use conditions.
- Polyurethane Protective Tape meets US Federal and California regulations for landfillable materials. The product is potentially recyclable.
- Packaging materials meet US Federal and California regulations for landfillable materials and are recyclable or reusable.
- This product is considered to be an article that does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

Shipping and Storage

No special/hazardous labeling or packaging required and no regulations for air, ground or water shipment for this product.

Keep film in a clean area, away from excessive moisture and out of direct sunlight. Store rolls in the shipping carton. Return partially used rolls to the shipping carton.

Shelf Life: Two (2) years from the date of manufacture or as expressly certified by 3M.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, please visit www.3M.com/msds or call 1-800-364-3577 or (651) 737-6501.

For Additional Information

In the U.S., call toll free 1-800-235-2376, or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5714. If you are outside of the U.S., please contact your nearest 3M office or one of the following branches:

Australia 61-2-498-9711 tel 61-2-498-9710 fax	Austria 01-86686-298 tel 01-86686-229 fax	Brazil 55 19 3838-7876 tel 55 19 3838-6892 fax	Canada 800-410-6880 ext. 6018 tel 800-263-3489 fax
China 86-21-62753535 tel 86-21-62190698 fax	Denmark 45-43-480100 tel 45-43-968596 fax	France 0810-331-300 tel 30-31-6195 fax	Germany 02131-14-2344 tel 02131-14-3647 fax
Italy 02-7035-2177 tel 02-7035-2125 fax	Japan 03-3709-8245 tel 03-3709-8743 fax	Korea 02-3771-4114 tel 02-786-7429 fax	Netherlands 31-71-5-450-272 tel 31-71-5-450-280 fax
South Africa 11-922-9111 tel 11-922-2116 fax	Spain 34-91-321-6000 tel 34-91-321-6002 fax	Switzerland 01-724-9114 tel 01-724-9068 fax	United Kingdom (0) 161-237-6174 tel (0) 161-237-3371 fax

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer

Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



These products were manufactured under a 3M Quality Management System registered to the AS9100 standard.

Aerospace and Aircraft Maintenance Department

3M Center, Building 223-1N-14
St. Paul, MN 55144-1000
1-800-235-2376
www.3M.com/aerospace

3M and Scotch-Weld are trademarks of 3M Company.
Scotch-Brite is registered trademark of 3M Company.

Please recycle. Printed in U.S.A.
©3M 2011 (12/10) All rights reserved.
60-9700-0245-1