



Polyurethane Protective Tape and Boots Removal and Repair Procedures

Technical Bulletin

February 2011

Removal Procedures:

There are three recommended methods to remove 3M™ Polyurethane Protective Tape and Boots.

1) **Physically remove the 3M Polyurethane Protective Tape or Boot** by lifting an edge and peeling the tape back at an angle of 90° to 180°. If an edge sealer has been used, residual material can be sanded off using a DA (dual action) sander and 280 grit sandpaper, or the edge sealer may be softened with a small wallpaper steamer and scraped off with a phenolic scraper or plastic squeegee. Adhesive residue left on the surface may be removed by applying acetone, isopropyl alcohol*, or 3M™ Citrus Base Cleaner to a clean rag or cheesecloth and scrubbing any remaining adhesive residue from the area. A 3M™ Scotch-Brite™ General Purpose Hand Pad 7447 may aid in removing stubborn areas of adhesive, especially around any surface protrusions, such as rivet heads, etc.

2) A **wallpaper steamer** may be used to remove 3M Polyurethane Protective Tape and Boots and edge sealer. This can be accomplished by directing a jet of low pressure steam from a wallpaper steamer at the peel point of the tape and sealer. Use of a phenolic scraper or plastic squeegee will aid in removal. Any remaining adhesive residue can be removed using acetone, isopropyl alcohol, or 3M™ Citrus Base Cleaner* as described above.

3) **3M™ Tape and Residue Remover** may be used to remove the tape in its entirety. Apply a 1/8" thick layer of the 3M Tape and Residue Remover to the surface of the tape. Allow to dwell for approximately four hours. Covering the 3M Tape and Residue Remover with a layer of plastic food wrap or aluminum foil will prevent evaporation and cross-contamination. After this dwell period, the tape can be pulled from the structure. Any remaining adhesive residue can be removed with another application of the 3M Tape and Residue Remover. **Note:** 3M Tape and Residue Remover is not intended to be used with 3M Polyurethane Protective Tape 8641.



Wallpaper Steamer



Edge Sealant Removal



3M™ Tape and Residue Remover

***Note:** When using solvents and other chemical products, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use. Consult local air quality regulations that may regulate or prohibit the use of surface preparation and cleaning materials based on solvent (VOC) content.

Technical Bulletin

3M™ Polyurethane Protective Tape and Boots – Removal and Repair Procedures

Repair Procedure:

If damage to the 3M™ Polyurethane Protective Tape or Boot has occurred, a “field” repair can be made as follows:

- 1) Carefully trim any areas of damaged or loose tape from the affected area.
- 2) Remove the tape and clean the area as described in the removal instructions.
- 3) Determine whether a flush patch or an overlap patch will be used. Repairs can be made more quickly with overlap patches, but flush patches will have better aesthetics.
- 4) Cut a piece of repair tape to the size required. If an overlap patch is being used, cut the tape to allow for a 1"-1-1/2" overlap. If a flush patch is being used, allow for a 1/8" gap to be filled with sealant.
- 5) Prime the repair area with a primer such as 3M™ Adhesion Promoter 86A* using the minimum amount necessary to achieve complete coverage. If an overlap patch is being used, prime the overlap area as well. Adjacent areas may be masked if desired prior to applying the primer. Wait a minimum of 10 minutes before applying the patch.
- 6) Remove the adhesive liner and carefully apply the patch to the area using a rolling down motion to exclude air and accommodate surface irregularities. Do not attempt to reposition the patch. Press down firmly on the patch to ensure complete adhesion.
- 7) For edge sealing, use 3M™ Scotch-Weld™ Epoxy Adhesive DP190 Gray or 3M™ Edge Sealer ES2000 according to the mixing instructions to fill the gaps around the patch. Use a rubber glove on a finger or a squeegee to smooth out the sealant.
- 8) The patch will be serviceable immediately if edge sealer is not used, or as soon as adequate cure is achieved if edge sealer is used. When using 3M™ Scotch-Weld™ Epoxy Adhesive DP190 Gray, adequate cure for flight can be achieved in 8 hours @ 70°F (21°C). When using 3M™ Edge Sealer ES2000, adequate cure can be achieved in approximately 2 hours @ 70°F (21°C).
- 9) If it is desired to paint the repaired area, refer to the 3M Technical Bulletin “Polyurethane Protective Tape, Painting Instructions” (70-0702-6358-0) for the recommended procedure.

Product	3M ID	UPC	Package
3M™ Tape and Residue Remover , 35975, 1 pint	60-4300-5079-3	00-051131-35975-8	6/case
3M™ Citrus Base Cleaner, 24 fl oz	62-4615-4930-5	00-021200-76394-6	12/case
3M™ Scotch-Brite™ General Purpose Hand Pad, 7447, 20 pads per box 3 boxes per case	61-5001-2323-9	20/box 00-048011-04029-5	60/case
3M™ Adhesion Promoter 86A 1 Pint Can 7" x 7" Wipes	70-0707-4280-7 70-2022-7012-3	00-021200-31592-3 00-021200-96361-2	12 pints/case 5 packets/pouch
3M™ Scotch-Weld™ Epoxy Adhesive DP190 Gray Duo-Pak, 50 ml (1.7 fl oz)	62-3553-1435-2	00-021200-22647-2	12 per case
3M™ Edge Sealer ES2000 Clear Duo-Pak, 50 ml (1.7 fl oz)	70-0062-7013-9	00-021200-96227-1	12 per case

***Note:** When using solvents and other chemical products, extinguish all ignition sources, including pilot lights, and follow the manufacturer’s precautions and directions for use. Consult local air quality regulations that may regulate or prohibit the use of surface preparation and cleaning materials based on solvent (VOC) content.

Technical Bulletin

3M™ Polyurethane Protective Tape and Boots – Removal and Repair Procedures

Safety and Regulatory

- 3M™ Polyurethane Protective Tape is **100%** solids and contains no hazardous air pollutants (HAPs), 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.

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, Scotch-Weld and Scotch-Brite are trademarks
of 3M Company.

Please recycle. Printed in U.S.A.
©3M 2011 (2/11) All rights reserved.
60-9700-0113-1