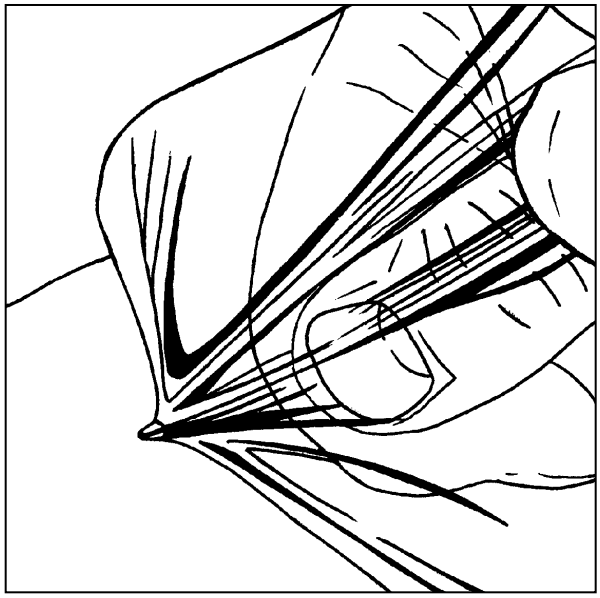
3M

Polyurethane Protective Tape

Preparation and Application Instructions

Technical Bulletin **October, 2001**

General Use



I. Tools and Materials Required

1. Clean lint free cotton rags or equivalent
2. 3M™ Adhesive Cleaner 8984 or equivalent*
3. Isopropyl alcohol*
4. 3M™ Plastic Applicator PA-1 (orange or clear) or equivalent
5. Razor blade safety knife
6. Common pin or hypodermic needle

For wet application method:

7. Spray bottle (1 pint)
8. Wetting Solution: (1 pint)
   25% isopropyl alcohol*
   75% water
   4 drops of liquid dishwashing detergent (per pint).

For aircraft applications:

9. 3M™ Scotch-Brite™ Commercial Scour Pad 7447 (maroon) or equivalent
10. 3M™ Sandpaper 400 grit or equivalent
11. Methyl Ethyl Ketone (MEK)*
12. Scotch™ Hi Performance Crepe Masking Tape 232 1" wide or equivalent
13. Isopropyl alcohol*

II. GENERAL CLEANING AND SURFACE PREPARATION

All substrates should be considered contaminated and must be cleaned prior to application of PPT.
The recommended procedure is as follows:

1. Saturate a clean cotton cloth with a pretroleum distillate based cleaner such as DuPont Prep-Sol Brand Solvent Cleaner 3919S or 3M™ Adhesive Cleaner 8984 and wipe the substrate surface.*
2. Wipe the surface as above except with isopropyl alcohol.
3. Dry with a lint free cloth before the solvent evaporates from the surface.

III. SPECIFIC APPLICATION SURFACES:

AIRCRAFT POLYURETHANE PAINT SUFACES:
NOTE: Paint must be fully cured before applying PPT film. (Minimum of 24 hrs. @ 72°F)

1. Mask application area with one inch masking tape.
2. Follow General Cleaning and Surface Preparation procedure above.
3. Sand with 400 sandpaper and follow with 3M™ Scotch-Brite™ Commercial Scour Pad 7447 (maroon).
4. Thoroughly wipe with isopropyl alcohol* until there is no trace of paint residue.

NOTE: 3M™ Adhesion Promoter 86A should be used on critical applications where the user has determined its suitability. (See Product Information page for Adhesion Promoter 86A for additional information.)

UNPAINTED METAL SURFACES:
Aluminum (etched, anodized), Stainless Steel, Nickel and many other metal surfaces require only a solvent wipe before application of PPT.

IV. APPLICATION INSTRUCTIONS

A. Surface preparation - See General Cleaning and Surface Preparation in Section II above.
B. Temperature - The protective tape can be applied when air and application temperatures are above +60°F (16°C).
C. Liner Removal - Depending on size and shape, all or a portion of the protective liner should be removed from the protective tape before the start of the application. **NOTE:** (HANDS MUST BE KEPT CLEAN AT ALL TIMES.)

***NOTE:** When using solvents, follow manufacturer's precautions and directions for use.

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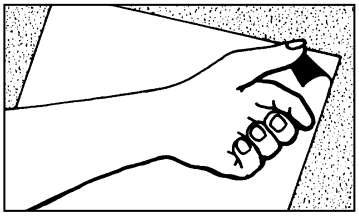
D. DRY APPLICATION METHOD

NOTE: Cloudy appearance will disappear with time, as adhesive wets out.

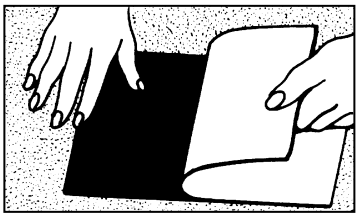
1. Pieces smaller than one square foot (0.1 sq. meter)
   a. Remove entire liner from adhesive side of film.
   b. Align film and press one edge to surface with finger.
   c. With plastic applicator, squeegee remaining unapplied portion using firm overlapping strokes.
2. Long, narrow (4" or less) sectons.
   a. Apply as above except remove only 12 inches of liner at a time.

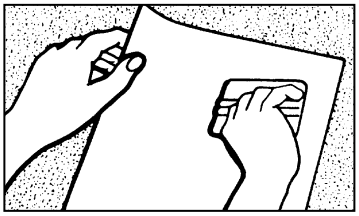


E. WET APPLICATION METHOD

This method is designed to facilitate the application of large (> 6" [150 mm] width) or special shapes in order to help prevent pre-adhesion which could result in wrinkles, creases, blisters and bubbles in the protective tape.

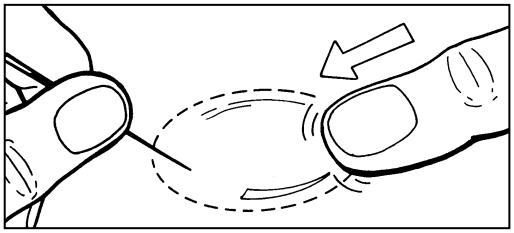
1. Mix the wetting solution as follows:
   Thoroughly mix 4 drops of liquid dishwashing detergent (not soap) in a pint (1/2 liter) solution of 25% isopropyl* alcohol and 75% water.
2. Mark correct position of film on application surface.
3. Remove liner and flood adhesive side with wetting solution.
4. Thoroughly spray application surface with wetting solution.
5. Position film and spray wetting solution on film surface to prevent squeegee from sticking.
6. Squeegee from top of film to bottom using firm, overlapping strokes to smooth out film. Dry entire area with rag. Work out blisters with the plastic applicator, or pull pack.
7. Trim with a sharp razor blade being careful not to cut into the application surface.
8. Allow applied protective tape to dwell overnight and check for blisters. Re-squeegee and remove blisters if present.





F. REMOVAL OF ENTRAPPED AIR OR WETTING SOLUTION

If blisters are present after the application, puncture film at one end of blister with a pin or a hypodermic needle, and press out with squeegee or thumb toward puncture.



***NOTE:** When using solvents, follow manufacturer's precautions and directions for use.

For Additional Information

For additional information call 1-800-235-2376. For Technical Service assistance, call 651-736-5954. Address correspondence to 3M Aerospace Lab, Technical Service, 3M Center, Building 209-2S-32, St. Paul, MN 55144-1000.

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ISO 9002

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

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