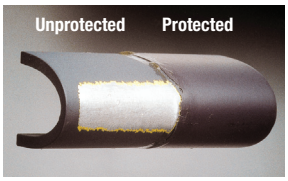
Rotor Blade Protection Application

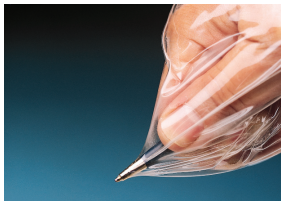
Process/Shop: Exterior Protection/Corrosion Shop/Squadrons/Depots/Helicopter OEMs

Key Issues: Corrosion, erosion and foreign object damage (FOD) management.

Application Attribute: Helps reduce rain and sand erosion damage and provides protection from FOD. Significantly reduces FOD costs and extends blade service life.

PRODUCT SOLUTION  	3M™ Polyurethane Protective Tapes 3M™ Adhesion Promoter 86A 3M™ Rotor Blade Protection Kit 8999 K11 Simple tools are required for installation of 3M Polyurethane Protective Tapes.

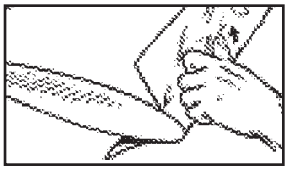
KEY BENEFITS	**Excellent Moisture Protection:** Polyurethane Protective Tapes applied over the aircraft leading edges provides an excellent barrier to FOD erosion and abrasion damage.
	Fast, Safe, and Easy Application: Polyurethane Protective Tapes have strength and body which allow them to be easily handled without tearing and do not contain hazardous chemicals. Application is achieved by removing a protective liner from the adhesive side of the tape and applying the tape directly onto the prepared surface. Repair to damage can be performed in the field.
	Erosion Protection: Polyurethane Protective Tapes applied in this application have been demonstrated to prevent erosion and corrosion caused by FOD and reduces maintenance costs.

KEY ADVANTAGES 	**Forms a Tough, Durable Barrier:** Polyurethane Protective Tapes have been exposed to a wide range of UV, fluids and performance testing. Polyurethane Protective Tapes provide a unique combination of high strength abrasion resistance and conformability necessary to perform in this application.
	Replaces Similar Materials: Polyurethane Protective Tapes have been designed and specified by military and commercial aircraft OEMs to resolve performance problems observed with other alternative materials and techniques previously used including paint, sprayable coatings, epoxy bonded boots and other sealing materials.

3M ROTOR BLADE PROTECTION APPLICATION

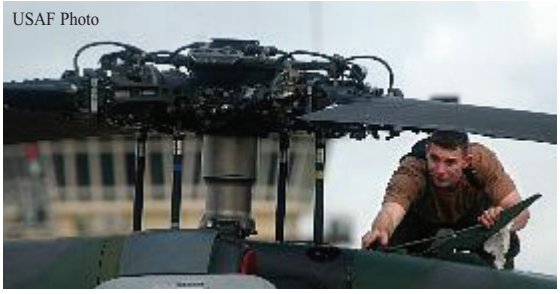
RELATED GOVERNMENT REGULATORY, INDUSTRY SPECIFICATIONS AND EXPERIENCE	
Technical Bulletin	3M™ Polyurethane Protective Tapes are used by military organizations to minimize corrosion, erosion and FOD. AH-64, OH-58, UH-60, AH-1, UH-1 and CH-47 are authorized in Army technical bulletin 1-1615-351-23. CH-53 is authorized in Navy and Marine tech directive.

SOLUTIONS FOR SURFACE PROTECTION



Press tape from leading edge to trailing edge at a 45º angle.

Adhesion to structure:
Polyurethane Protective Tapes and Boots maintain excellent adhesion to surface structures, sealants, and raised features to form a continuous barrier.
Polyurethane Protective Tapes and Boots provide a solution to blade erosion that has minimal effect on rotor blade track and balance.



POLYURETHANE PROTECTIVE TAPES		
Description	**Color**	**3M ID**
3M™ Polyurethane Protective Tape 8545-custom sized; skip slit liner	Matte Black	70-0001-1475-4
3M™ Polyurethane Protective Tape 8580 - 5" x 8' roll	Matte Black	70-0061-1015-2
3M™ Polyurethane Protective Tape 8663-custom sized; skip slit liner	Clear	70-0000-5607-0
3M™ Polyurethane Protective Tape 8663-custom sized; non skip slit liner	Clear	70-0000-4526-3
3M™ Polyurethane Protective Tape 8663MB-custom sized; skip slit liner	Matte Black	70-0000-6236-7
3M™ Polyurethane Protective Tape 8663MB-custom sized; non skip slit liner	Matte Black	70-0000-6237-5
3M™ Polyurethane Protective Tape 8663HS-custom sized	Clear	70-2022-7220-2
3M™ Polyurethane Protective Tape 8667 - 5" x 36 yards	Matte Black	70-2022-7201-2
3M™ Polyurethane Protective Tape 8667MB-custom sized; skip slit liner	Matte Black	70-0001-2074-4
3M™ Polyurethane Protective Tape 8667MB-custom sized	Matte Black	70-0000-9484-0
3M™ Polyurethane Protective Tape 8671-custom sized	Clear	70-0000-3879-7
3M™ Rotor Blade Protection Kit 8999 K11		70-2022-7197-2
OTHER PRODUCTS		
3M™ Scotch-Weld™ Epoxy Adhesive DP-190 1.7 fl oz; 12 per carton	Gray	62-3553-1435-2
3M™ Adhesion Promoter 86A; 1 pt; 12 per carton	Transparent	70-0707-4280-7
3M™ Adhesion Promoter 86A; wipes; 5 per pack	Transparent	70-2022-7012-3
3M™ Scotch-Weld™ EPX™ Mixing Nozzle 9742, 50 ml; 72 per carton		62-9742-9935-6
3M™ Scotch-Weld™ EPX™ Plus II Applicator 50 ml - 1:1 ratio - 10 per carton		62-9170-9930-1
3M™ Scotch-Weld™ EPX™ Plus II Mixing Nozzle 50ml - 72 per case		62-9171-9153-8

For Additional Information	To request additional product information or to arrange for sales assistance, call toll free 1-800-235-AERO (800-235-2376). Address correspondence to: 3M Aerospace and Aircraft Maintenance Division, 3M Center, Building 223-1N-14, St. Paul, MN 55144-1000.
Military Customers	To order 3M products, please call 1-866-556-5714 or 651-575-6688. The fax number is 651-737-4380.
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Limitation of Remedies And Liability	If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.
For Additional Product Safety and Health Info.	See Material Safety Data Sheet.

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Transportation Business

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