



UHMW Polyethylene Tape

5425

Technical Data

August, 1995

Product Description Ultra-high molecular weight polyethylene film coated with a special acrylic adhesive that is resistant to many solvents.

Construction	Backing	Adhesive	Color	Standard Roll Length
	Ultra-high molecular weight polyethylene	Acrylic	Translucent	36 yds. (33 m)

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

		ASTM Test Method
Adhesion to Steel:	30 oz./in width (33 N/100 mm)	D-3330
Tensile Strength at Break:	45 lbs./in. width (788 N/100 mm)	D-3759
Elongation at Break:	275%	D-3759
Backing Thickness:	3 mils (.08 mm)	D-3652
Total Tape Thickness:	4.5 mils (.11 mm)	D-3652
Temperature Use Range:	-30°F to 225°F (-34°C to 107°C)	

General Information

- UHMW polyethylene is a thermoplastic that has a unique combination of properties which make it ideal for many tough impact wear or sliding applications. Within its operational temperature range, UHMW polyethylene tape can provide the following advantages:
 - A. **Outstanding abrasion resistance:** Will outwear many types of PTFE and other materials in sliding applications.
 - B. **Low coefficient of friction:** Exceeded only by the PTFE's.
 - C. **Self-lubricating:** Can often be used where lubrication is not possible because of contamination.
 - D. **Sound damping:** High energy absorption capacity helps reduce noise levels in machinery and equipment.

Application Ideas

- Abrasion protection for rubber fuel cells.
- Gaskets exposed to many corrosive chemicals.
- Spiral wrap wire harness to resist hydraulic fluids.
- Dissimilar metal separation to help prevent wear and chemical corrosion.
- Excellent for wear surfaces where transparency is needed.
- Guide rails and chutes requiring a more durable, solvent resistant slide surface.

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Features	Advantages	Benefits
<ul style="list-style-type: none">Tough UHMW polyethylene	<ul style="list-style-type: none">Resists abrasion and wear under loadRelease surface for many sticky resinous or viscous materialsInert to many chemicals and solventsHelps reduce friction which facilitates movement, sliding	<ul style="list-style-type: none">Helps save moneyHelps reduce clean-up and maintenance costsHelps protect surfaces of parts or equipmentHelps increase production speeds
<ul style="list-style-type: none">Acrylic adhesive	<ul style="list-style-type: none">Resistant to many solvents and chemicalsFirm, long agingTransparent	<ul style="list-style-type: none">Helps reduce failures due to undercutting of solvents and softening of the adhesiveHelps reduce failure caused by adhesive oozing and loss of tackMinimizes distortion of taped surface to provide optimum aesthetics

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-227-5085. Address correspondence to: 3M Industrial Tape and Specialties Division, 3M Center, Building 220-8E-04, St. Paul, MN 55144-1000. Our fax number is 612-733-9175. In Canada, phone: 1-519-451-2500. In Puerto Rico, phone: 1-809-750-3000. In Mexico, phone: 5-728-0400.

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ISO 9002

This Industrial Tape and Specialties Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

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