UHMW Polyethylene Tape
5421 · 5423

Technical Data **July, 2016**

Product Description

3M™ UHMW Polyethylene Tapes are film coated with a rubber adhesive which provides an excellent abrasion resistant surface. These tapes feature a unique combination of properties that make it ideal for many tough impact wear or sliding applications. 3M™ UHMW-PE Film Tape 5421 is a thinner version of 3M™ UHMW-PE Film Tape 5423.

Product Construction

Backing	Adhesive	Color	Standard Roll Length
UHMW-PE Film (ultra-high molecular weight polyethylene)	Rubber	Translucent	36 yds. (32.9 m)

Typical Physical Properties

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
3M tape 5421		
Adhesion to Steel:	34 oz./in. width (37 N/100 mm)	D-3330
Tensile Strength:	46 lbs/in. width (796 N/100 mm)	D-3759
Elongation at Break:	470%	D-3759
Backing Thickness:	5.0 mils (0.13 mm)	D-3652
Total Tape Thickness (without liner):	6.7 mils (0.17 mm)	D-3652
Liner Thickness:	3.5 mils (0.09 mm)	D-3652
Temperature Use Range:	-30° to 225°F (-34° to 107°C)	
3M tape 5423		
Adhesion to Steel:	36 oz./in. width (39 N/100 mm)	D-3330
Tensile Strength:	86 lbs/in. width (1500 N/100 mm)	D-3759
Elongation at Break:	530%	D-3759
Backing Thickness:	10 mils (0.25 mm)	D-3652
Total Tape Thickness (without liner):	12 mils (0.30 mm)	D-3652
Liner Thickness:	3.5 mils (0.09 mm)	D-3652
Temperature Use Range:	-30° to 225°F (-34° to 107°C)	

Features

- Tape demonstrated no evidence of wear through after Taber Abrasion at 1000 cycles, using CS-10 wheel and 1000g load when applied to S-37 mounting sheet.
- Low water vapor transmission rate <0.50 g/100in.^{2}/24hrs.
- Thick caliper UHMW polyethylene tape for extended service life as a protective surface against tough impact wear or sliding applications.
- Outstanding abrasion resistance so will outwear PTFE and other materials in sliding applications.
- Low coefficient of friction characteristics is exceeded only by PTFE.
- UHMW-PE tape can be used where lubrication is not possible because of contamination.
- Rubber Adhesive provides good initial tack for immediate bonding to material surface.
- Liner makes it ideal for fabricating or die-cutting into various lengths and shapes.

Application Ideas

- Noise reduction between dissimilar parts.
- Reduce squeaks, rattles and other noises that occur with movement
- Lining of conveyer guide rails, tank and bin liners, and discharge chutes.
- Protection for aluminum sheets on stretch forming presses.
- Liners for Spray booths.
- Slick surface for easy glide for drawers and cabinets.

Storage

Store under normal conditions of 60° to 80°F (16° to 27°C) and 40 to 60% relative humidity in the original packaging material.

Shelf Life

To obtain best performance, use this product within 18 months from date of manufacture.

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.

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ISO 9002

This Industrial Adhesives and Tapes Division product was manufactured under a quality system registered to ISO 9001:2000 standards.

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