3M[™] PTFE and UHMW-PE Tapes

Low Coefficients of Friction With Choice of Other Characteristics

3M[™] PTFE and UHMW-PE Tapes meet many application requirements for Printing, Aerospace, Automotive and MRO (Maintenance and Repair).

3M™ PTFE Tapes

- Low coefficient of friction to help improve web processing
- Resists up to 500°F (260°C) for long performance on heat sealing machines
- Anti-stick for easy cleanup of hot plastic
- Chemical-resistant barrier
- Silicone-free adhesive available

3M™ UHMW-PE Tapes

- Abrasion resistant to protect chutes, guide rails, and containers from wear
- Low coefficient of friction for "slip plane" effect between surfaces to reduce noise
- Anti-stick for ready release of many inks and adhesives



For automotive noise reduction, 3M™ UHMW-PE Tape 5425 provides a "slip plane" effect between incompatible surfaces to help reduce squeaks and rattles.



Conformable 3M™ PTFE Tape helps the movement of web materials in many types of roller wrapping applications.



Corrugated boxes slide more easily down a chute lined with abrasion-resistant 3M™ UHMW-PE Tapes.



In shrink wrapping operation, 3M™ PTFE Glass Cloth Tape 5451 helps protect the bar underneath where the hot wire seals the plastic film.

3M[™] Slick Surface Tapes — Performance Comparison

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Attribute			Best					
Heat Resistance	UHMW-PE Tape	PTFE Film Tape	PTFE Glass Cloth Tape					
Wear Life	PTFE Film Tape	PTFE Glass Cloth Tape	UHMW-PE Tape					
Conformability	PTFE Glass Cloth Tape	UHMW-PE Tape	PTFE Film Tape					
Low Friction Coefficient	UHMW-PE Tape	PTFE Glass Cloth Tape	PTFE Film Tape					
Anti-stick/Solvent Resistance	PTFE Glass Cloth Tape	UHMW-PE Tape	PTFE Film Tape					

3M™ PTFE Tapes

	11 L 10			Backing	Total				Temperature	
Product	Color	Adhesive Type	Backing Material	Thickness mils (mm)	Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength lb/in (N/100 mm)	Elongation at Break %	Range °F (°C)	Comments
Based or	n ASTM Tes	st Method:		D-3652	D-3652	D-3330	D-3759	D-3759		
Glass Clo	Glass Cloth									
5151/ 5151L/ 5151PL	Light Brown	Silicone	PTFE GC	3.0 (0.08)	5.3 (0.13)	33 (36)	110 (1925)	5	-100 to 500 (-73 to 260)	General purpose PTFE glass cloth tape. 5151L is a linered version of 5151. 5151PL is a thicker, premium liner.
5153/ 5153L	Light Brown	Silicone	PTFE GC	5.8 (0.15)	8.0 (0.20)	43 (47)	h		-100 to 500 (-73 to 260)	General purpose PTFE glass cloth tape. 5153L is a linered version of 5153.
5451	Brown	Silicone	PTFE GC	3.2 (0.08)	5.6 (0.14)	28 (31)			-100 to 500 (-73 to 260)	Heat seal tape.
5453	Brown	Silicone	PTFE GC	6.0 (0.15)	8.2 (0.21)	55 (56)	175 (3065)	5	-100 to 500 (-73 to 260)	Heat seal tape.
Skived F	ilm									
5180	Gray	Silicone	PTFE	2.0 (0.05)	3.5 (0.09)	25 (28)	30 (525)	100	-65 to 500 (-54 to 260)	General purpose PTFE skived film tape.
5181	Gray	Silicone	PTFE	5.0 (0.13)	6.5 (0.17)	35 (39)	75 (1300)	100	-65 to 500 (-54 to 260)	General purpose PTFE skived film tape.
5185	Red	Silicone	PTFE	2.7 (0.07)	4.2 (0.11)	27 (30)	41 (716)	117	-65 to 500 (-54 to 260)	Roller wrapping tape.
5480	Gray	Silicone	PTFE	2.0 (0.05)	3.7 (0.09)	20 (22)	27 (473)			Roller wrapping tape.
5481	Gray	Silicone	PTFE	5.0 (0.13)	6.8 (0.17)	32 (35)	49 (858)	335	-65 to 500 (-54 to 260)	Heavy-duty roller wrapping tape.
Extruded	l Film									
5490	Gray	Silicone	PTFE	2.0 (0.05)	3.7 (0.09)	27 (29)	22 (385)	150	-65 to 500 (-54 to 260)	Lay-flat backing.
5491	Gray	Silicone	PTFE	5.0 (0.13)	6.7 (0.17)	35 (38)	40 (700)	200	-65 to 500 (-54 to 260)	Lay-flat backing.
5498	Brown	Rubber	PTFE	2.0 (0.05)	4.0 (0.10)	48 (53)	19 (332)	105	40 to 350 (4 to 177)	Non-silicone adhesive.

3M[™] UHMW-PE Tapes

Color	Adhesive Type	Backing Material	Backing Thickness mils (mm)	Liner Type	Total Thickness mils (mm)	Adhesion to Steel oz/in (N/100 mm)	Tensile Strength Ib/in (N/100 mm)	Elongation at Break %	Temperature Range °F (°C)	Comments
ASTM Test M			D-3652		D-3652	D-3330	D-3759	D-3759		
Transparent	Rubber	UHMW-PE	5.0 (0.13)	60# Densified Kraft Paper	6.7 (0.17)	26 (28)	30 (526)	275	-30 to 225 (-34 to 107)	General purpose tape to protect plastic and metal chutes, guide rails and containers from wear.
Transparent	Rubber	UHMW-PE	10.0 (0.25)	60# Densified Kraft Paper	11.7 (0.30)	26 (28)	55 (963)	300	-30 to 225 (-34 to 107)	Excellent abrasion resistance and low coefficient of friction makes this an effective solution for noise and vibration problems.
Transparent	Acrylic	UHMW-PE	3.0 (0.08)	55# Densified Kraft Paper	5.0 (0.13)	30 (33)	45 (788)	100	-30 to 225 (-34 to 107)	Solvent resistant adhesive with low coefficient of friction and abrasion resistance.
Transparent	Acrylic	UHMW-PE	5.0 (0.13)	55# Densified Kraft Paper	7.0 (0.18)	75 (82)	40 (696)	175	-30 to 225 (-34 to 107)	High tack adhesive.
Black	Acrylic	UHMW-PE	5.0 (0.13)	55# Densified Kraft Paper	6.5 (0.17)	75 (82)	40 (696)	175	-30 to 225 (-34 to 107)	Black version of 5430 tape.
Transparent	Acrylic	UHMW-PE	3.0 (0.08)	55# Densified Kraft Paper	5.0 (0.13)	50 (55)	40 (696)	175	-30 to 225 (-34 to 107)	Thin version of 5430 tape.
	ASTM Test M Transparent Transparent Transparent Transparent Black	Color Type ASTM Test Method: Transparent Rubber Transparent Rubber Transparent Acrylic Transparent Acrylic Black Acrylic	Color Type Material ASTM Test Method: Transparent Rubber UHMW-PE Transparent Rubber UHMW-PE Transparent Acrylic UHMW-PE Black Acrylic UHMW-PE	ASTM Test Method: D-3652 Transparent Rubber UHMW-PE 5.0 (0.13) Transparent Rubber UHMW-PE 10.0 (0.25) Transparent Acrylic UHMW-PE 3.0 (0.08) Transparent Acrylic UHMW-PE 5.0 (0.13) Black Acrylic UHMW-PE 5.0 (0.13) Transparent Acrylic UHMW-PE 3.0	ASTM Test Method: D-3652 Transparent Rubber UHMW-PE 5.0 (0.13) 60# Densified Kraft Paper Transparent Rubber UHMW-PE 10.0 (0.25) 60# Densified Kraft Paper Transparent Acrylic UHMW-PE 3.0 (0.25) 55# Densified Kraft Paper Transparent Acrylic UHMW-PE 5.0 (0.13) 55# Densified Kraft Paper Black Acrylic UHMW-PE 5.0 (0.13) 55# Densified Kraft Paper Transparent Acrylic UHMW-PE 3.0 (0.13) 55# Densified Densified Transparent Acrylic UHMW-PE 3.0 (0.13) 55# Densified	ASTM Test Method: D-3652 D-3652 Transparent Rubber UHMW-PE 5.0 (0.13) 60# Densified Kraft Paper (0.17) 6.7 (0.17) Transparent Rubber UHMW-PE 10.0 (0.25) 60# Densified Kraft Paper (0.30) 11.7 (0.30) Transparent Acrylic UHMW-PE 3.0 (0.08) 55# Densified Kraft Paper (0.13) 5.0 (0.13) Transparent Acrylic UHMW-PE (0.13) 55# Densified Kraft Paper (0.18) 7.0 (0.18) Black Acrylic UHMW-PE (0.13) 55# Densified Kraft Paper (0.17) 6.5 (0.17) Transparent Acrylic UHMW-PE (0.13) 55# Densified Spensified (0.17) 6.5 (0.17)	ASTM Test Method: D-3652 D-3652 D-3652 D-3330 Transparent Rubber UHMW-PE 5.0 (0.13) 60# Densified Kraft Paper (0.17) 6.7 (26) (0.17) 26 (0.17) (28) Transparent Rubber UHMW-PE 10.0 (0.25) 60# Densified Kraft Paper (0.30) 11.7 (26) (0.30) (28) Transparent Acrylic UHMW-PE 3.0 (0.08) 55# Densified Kraft Paper (0.13) 5.0 (0.13) 33) Transparent Acrylic UHMW-PE 5.0 (0.13) 55# Densified Kraft Paper (0.18) 6.5 (0.18) 75 (0.17) (82) Transparent Acrylic UHMW-PE 5.0 (0.13) 55# Densified Kraft Paper (0.17) 6.5 (0.17) 75 (0.17) 62)	ASTM Test Method: D-3652 D-3652 D-3652 D-3330 D-3759 Transparent Rubber UHMW-PE 5.0 (0.13) 60# Densified Kraft Paper 6.7 (0.17) 26 (0.17) 30 (0.17) (526) Transparent Rubber UHMW-PE (0.25) 60# Densified Kraft Paper 11.7 (0.30) 26 (0.30) 55 (0.30) (28) (963) Transparent Acrylic UHMW-PE (0.08) 55# Densified Kraft Paper (0.13) 5.0 (0.13) 30 (0.13) (788) Black Acrylic UHMW-PE (0.13) 55# Densified Kraft Paper (0.18) 6.5 (0.17) 40 (0.18) 696) Transparent Acrylic UHMW-PE (0.13) 55# Densified Kraft Paper (0.17) 6.5 (0.17) 75 (0.17) 40 (0.18) Transparent Acrylic UHMW-PE (0.13) 55# Densified Kraft Paper (0.17) 6.5 (0.17) 75 (0.17) 40 (0.17) Transparent Acrylic UHMW-PE (0.13) 55# Densified (0.17) 6.5 (0.17) 60 (0.17) 60 (0.17) 60 (0.17) 60 (0.17) 60 (0.17) 60 (0.17) 60 (0.17) 60 (0.17)	ASTM Test Method: D-3652 D-3652 D-3652 D-3330 D-3759 D-3759 Transparent Rubber UHMW-PE 5.0 (0.13) 60# Densified Kraft Paper 6.7 (0.17) 26 (28) (526) 30 (526) 275 Transparent Rubber UHMW-PE 10.0 (0.25) 60# Densified Kraft Paper 11.7 (0.30) 26 (28) (963) 300 Transparent Acrylic UHMW-PE 3.0 (0.08) 55# Densified Kraft Paper 5.0 (0.13) 30 (33) (788) 100 Transparent Acrylic UHMW-PE 5.0 (0.13) 55# Densified Kraft Paper 7.0 (0.18) (82) (696) 175 Black Acrylic UHMW-PE 5.0 (0.13) (55# Densified Kraft Paper 6.5 (0.17) (82) (696) 175 Transparent Acrylic UHMW-PE 3.0 (55# Densified Kraft Paper 5.0 (0.17) (82) (696) 175	ASTM Test Method: D-3652 D-3652 D-3652 D-3330 D-3759 D-3759 D-3759 D-3759 Transparent Rubber UHMW-PE D-3652 D-3652 D-3652 D-3652 D-3652 D-3759 D-30 to 225 (-34 to 107) D-30 to 225 (-34 to 107) D-30 to 225 D-30 to 225

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