

DuPont Teijin Films Mylar® A Polyester Film, 1400 Gauge

Category : Polymer , Film , Thermoplastic , Polyester, TP , Polyester Film

Material Notes:

Mylar® A films are tough, general purpose films that are transparent in 48 through 92 gauge and translucent in heavier gauges. They have a rough surface to provide ease of handling, good adhesion, and processability. Mylar® A films have balanced tensile properties and excellent resistance to moisture and most chemicals. They can withstand temperature extremes from -100°F to 300°F. Mylar® does not become brittle with age under normal conditions, because it contains no plasticizers. Typical Applications: Apparel stays Book jackets Carbon ribbon Control Tape Drumheads Duct Liners Identifications Membrane touch switches Metallized Base Pressure Sensitive Labels (plain or metallized) Protective surfacing Release liners Roll leaf (hot stamping) Spirit Masters Approvals: FDA Food Contact Status - All gauges of Mylar® A comply with the Food and Drug Administration regulation 21 CFR 177.1630 -- Polyethylene phthalate polymers. This regulation describes films which may be safely used in contact with all types of food excluding alcoholic beverages. Uncoated films such as Mylar® A can be used to contain foods during oven cooking or oven baking at temperatures above 250 °F. UL 94 VTM-2 - for 92-1400 gauge (0.023 - 0.35mm). UL Recognition - for 92-500 gauge (0.023-0.13mm) HWI=5, HAI=4, CTI=1; for 700-1400 gauge (0.18-0.35mm) HWI=4, HAI=0, CTI=1 Information provided by DuPont.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Teijin-Films-Mylar-A-Polyester-Film-1400-Gauge.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in ³	ASTM D1505
Viscosity Measurement	0.56	0.56	ASTM D2857

Mechanical Properties	Metric	English	Comments
Film Elongation at Break, MD	170 %	170 %	ASTM D882A
Film Elongation at Break, TD	170 %	170 %	ASTM D882A
Tensile Modulus	3.50 GPa	507 ksi	ASTM D822
Compressive Yield Strength	39.7 MPa	5760 psi	ASTM D695
	@Strain 2.00 %	@Strain 2.00 %	
	114 MPa	16600 psi	1% offset; ASTM D695
	@Strain 1.00 %	@Strain 1.00 %	
	207 MPa	30000 psi	at max stress; ASTM D695
	@Strain 27.0 %	@Strain 27.0 %	
Compressive Modulus	2.74 GPa	397 ksi	ASTM D695
Poissons Ratio	0.38	0.38	Typical Mylar® before yield
	0.58	0.58	Typical Mylar® after yield

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Break, TD	172 MPa	25000 psi	ASTM D882A

Thermal Properties	Metric	English	Comments
CTE, linear	17.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 30.0 - 50.0 $^\circ\text{C}$	9.44 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 86.0 - 122 $^\circ\text{F}$	92 Gauge; ASTM D696
Specific Heat Capacity	1.17 J/g- $^\circ\text{C}$	0.280 BTU/lb- $^\circ\text{F}$	
Thermal Conductivity	0.155 W/m-K @Temperature 25.0 - 75.0 $^\circ\text{C}$	1.07 BTU-in/hr-ft ² - $^\circ\text{F}$ @Temperature 77.0 - 167 $^\circ\text{F}$	(Mylar® 1000A)
Melting Point	254 $^\circ\text{C}$	489 $^\circ\text{F}$	DSC
Maximum Service Temperature, Air	149 $^\circ\text{C}$	300 $^\circ\text{F}$	
Maximum Service Temperature, Inert	-73.3 $^\circ\text{C}$	-100 $^\circ\text{F}$	
Shrinkage, MD	1.3 % @Temperature 150 $^\circ\text{C}$, Time 1800 sec	1.3 % @Temperature 302 $^\circ\text{F}$, Time 0.500 hour	Unrestrained
Shrinkage, TD	0.80 % @Temperature 150 $^\circ\text{C}$, Time 1800 sec	0.80 % @Temperature 302 $^\circ\text{F}$, Time 0.500 hour	Unrestrained

Optical Properties	Metric	English	Comments
Refractive Index	1.64 - 1.67	1.64 - 1.67	typical of Mylar®

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	400 - 600 V	400 - 600 V	
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	

Descriptive Properties	Value	Comments
Yield (nominal)	1400 in ² /lb	

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