

This technical data refers to the following Lighthouse products:

3M White Polyester – 7816E

Lighthouse Item No. CPMSPO1 & CPMSPO21

Description

Gloss finished polyester film coated with a high tack permanent acrylic adhesive.

Applications

3M Gloss white polyester film offering good chemical and temperature resistance. Bonds to a variety of surfaces including high surface energy plastics, glass and metal. UL and cUL recognised. Ideal for marking equipment and components including barcode and asset labels, rating plates etc.

Technical Information

Thickness	Film Adhesive	50 microns 20 microns
Service Temperature		-40°C to 149°C -40°C for 3 Days no significant visual change 149°C for 24 hours no significant visual change 0.7% MD shrinkage. 0.9%CD shrinkage
Minimum Application Temperature		+5°C
Humidity Resistance 24 hours at 38°C (100°F) and 100% humidity		No significant change in appearance or adhesion

Adhesion - (Not for specification purposes) 90° Peel Adhesion. Test Procedure FTM 2						
	Initial (20 Minute Dwell/RT)		Ultimate Adhesion 72 hours Dwell at maximum UL Temperature rating		Conditioned for 3 Days at -40°C	
	N/10mm	Oz/In	N/10mm	Oz/In	N/10mm	Oz/In
Aluminium	3.1	28	6.4	58	2.8	25
Stainless Steel	4.7	43	6.8	62	5.9	54
Phenolic	3.1	28	4.7	43	4.0	36
ABS	3.4	31	3.2	29	4.6	42
Polycarbonate	2.5	23	3.1	28	3.3	42
Polystyrene	3.7	34	4.5	41	4.5	41
Polypropylene	0.5	4.6	1.8	16	1.1	10
HD Polyethylene	1.8	16	3.2	29	2.0	18
LD Polyethylene	0.9	8.2	1.3	12	1.3	12
Smooth Powder Coating	3.7	34	6.4	31	3.3	30

Adhesion - (Not for specification purposes) 180° Peel Adhesion. Test Procedure FTM 1						
	Initial (20 Minute Dwell/RT)		Ultimate Adhesion 72 hours Dwell at maximum UL Temperature rating		Conditioned for 3 Days at -40°C	
	N/10mm	Oz/In	N/10mm	Oz/In	N/10mm	Oz/In
Aluminium	4.2	38	6.7	61	4.7	43
Stainless Steel	4.5	41	8.7	80	7.0	64
Phenolic	4.8	44	8.7	80	5.0	46
ABS	5.2	47	6.0	55	4.9	45
Polycarbonate	5.1	46	4.2	38	5.8	53
Polystyrene	4.8	44	4.8	44	4.8	44
Polypropylene	0.4	3.6	3.1	28	0.6	5.5
HD Polyethylene	0.4	3.6	3.0	27	0.4	3.6
LD Polyethylene	0.4	3.6	0.8	7.5	0.4	3.6

Chemical Resistance					
The properties defined are based on four-hour immersions at room temperature (72°F/22°C) unless otherwise noted. Samples were applied to stainless steel panels 24 hours prior to immersion and were evaluated one hour after removal from the solution for peel adhesion. Adhesion measured at 90° peel angle (FTM 2 at 305mm/min)					
Surface	Adhesion to Stainless Steel			Appearance	Edge Penetration
	N/10mm	Oz./In.	% Change	Visual	Millimeters
Isopropyl Alcohol	5.4	49	90	No Change	1
Detergent 1% Alconox® Cleaner	5.5	51	104	No Change	1
Engine Oil (10W30) @ 250°F (121°C)	5.7	52	106	No Change	1
Water for 48 hours	5.7	52	106	No Change	0
pH 4	5.8	52	107	No Change	0
pH 10	5.8	53	107	No Change	0
Toluene	3.1	28	57	No Change	5.0
Acetone	3.0	27	56	No Change	6.0
Brake Fluid	5.3	48	98	Slight Damage	1
Gasoline	3.8	35	70	No Change	5.0
Diesel Fuel	4.6	42	85	No Change	0
Naphtha	3.2	29	59	No Change	3.0
Hydraulic Fluid	5.6	51	103	No Change	0

Compliance	RoHS 2 REACH 7816E UL and cUL recognized (File MH18072)
Shelf Life (When stored at 15-20°C & 50-60% relative humidity)	2 years
Compatible Ribbons for Printing	Speciality Ribbon Range

IMPORTANT NOTICE

All Lighthouse products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects.

Published information concerning Lighthouse products is based on research, which the Company believes to be reliable, although such information does not constitute a warranty.

Because of the variety of uses of Lighthouse products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use. We recommend the purchaser conducts their own testing to determine the suitability for their required application. The purchaser shall assume all risks regarding such use. The seller shall not be liable for damages in excess of the purchase price of the product nor for incidental or consequential damages.

All specifications are subject to change without prior notice.