

This technical data sheet refers to the following Lighthouse product(s):

CPMSP01 & CM5032, 3M White Polyester

PHYSICAL PROPERTIES

Not for specification purposes (Calipers are nominal values)

Face stock	50 micron Gloss Radiant White polyester
Adhesive	20 micron Acrylic
Liner	140 gsm
Shelf Life	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity

FEATURES

- ❑ Face stock is top coated for thermal transfer printing. Lighthouse durable resin ribbons are recommended for optimum durability.
- ❑ The Acrylic adhesive is firm, which resists oozing and provides high strength on a variety of surfaces including high surface energy (HSE) plastics and metals. It additionally has improved chemical and UV resistance.
- ❑ 3M White Polyester is UL and cUL approved (File Number MH18072). See UL listings for details.

APPLICATION IDEAS

- ❑ Barcode labels and rating plates.
- ❑ Property identification and asset labelling.
- ❑ Warning, instruction and service labels for durable goods.
- ❑ Nameplates for durable, electronic and sporting goods.

PERFORMANCE CHARACTERISTICS

Adhesion	90° Peel Adhesion, Test Procedure FTM 2				Conditioned for 3 days at -40°C	
	Initial (20 minute Dwell/RT)		Ultimate Adhesion 72 hours Dwell at Maximum UL Temperature Rating		90° Peel	
	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
D Polyethylene	1.8	16	3.2	29	2.0	18
LD Polyethylene	0.9	8.2	1.3	12	1.3	12
Powder Coating	3.7	34	6.4	31	3.3	30

Adhesion	180° Peel Adhesion. Test procedure FTM 1				Conditioned for 3 days at -40°C	
	Initial (20 minute Dwell / RT)		Ultimate Adhesion 72 Hours Dwell at Maximum UL Temperature Rating		180° Peel (FTM 1)	
	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

Liner Release	FTM 3		
	180° removal of Liner from Facestock		
	Rate of Removal	N/10mm	Grams/50mm width
	2.3 m/min	0.025	13

Environmental Performance	The properties defined are based on four hour immersions at room temperature 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 305 mm/min.				
Chemical Resistance	Adhesion to Stainless Steel			Appearance	Edge Penetration
Chemical	N/10mm	Oz/In	% Change	Visual	Millimetres
Isopropyl Alcohol	5.4	49	90	No change	1
Detergent (1% Alconox ®)	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	53	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

Temperature Resistance	149°C for 24 hours	No significant visual change 0.7% MD shrinkage 0.9% CD shrinkage
	-40°C for 3 days	No significant visual change
Humidity Resistance	24 hours at 38°C and 100% relative humidity	No significant changes in appearance or adhesion

PROCESSING

Printing	Face stock is top coated for improved ink receptivity and is designed for thermal transfer printing with Lighthouse durable resin ribbons. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress and screen printing.
Packaging	Finished labels should be stored in plastic bags.

SPECIAL CONSIDERATIONS

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.

NOTE: When using solvents, read and follow the manufacturer's precautions and directions for use.

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, and 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.