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Product Data Sheet



233 Silver Matte Polyester

Liberty 233 is a 2 mil, topcoated, thermal transfer printable (resin) silver polyester with a highly aggressive (A-118) permanent pressure sensitive acrylic adhesive and backed with a kraft release liner. Series 239 is UL Recognized for indoor and outdoor service use when used as a laminate on various Liberty Marking Systems base stocks. For further information please reference file # MH25432 or contact your Liberty Marking Systems representative.

PHYSICAL CHARACTERISTICS:

Service Temperature Range	-40° F to 302° F (-40° C to 150° C)
Minimum Application Temperature	32° F (0 C)
Expected Exterior Life	Two years
Storage Stability	Two years stored at 70° F (21° C) and 50% RH

Thickness	Film	2.0 mils +/- 10%
	Adhesive	1.9-2.0 mils +/- 0.1
	Liner	3.1 mils +/- 10%
Dimensional Stability	No shrinkage observed on aluminum panel at 160° F (70° C) for 24 hours.	

TOP COATING:

The topcoating is suitable for thermal transfer printing using resin based thermal transfer ribbon.

Product Performance and Suitability

All of the descriptive information and recommendations for the use of Liberty Marking Systems products are to be used only as a guide. The furnishing of such information and recommendations shall in no event constitute a warranty of any kind by Liberty Marking Systems. All purchasers of Liberty Marking Systems products shall independently determine the suitability of the material for the purpose for which it is purchased. No distributor, salesman, or representative of Liberty Marking Systems is authorized to give any warranty, guarantee, or to make any representation in addition or contrary to the above.

233 Silver (Matte) 2 mil Polyester

Surface	Temperature Limits	Recognition	Additional Exposures
Stainless Steel	-20° F to 302° F (-29° C to 150° C)	Indoor/Outdoor	O, W
Aluminum	-40° F to 302° F (-40° C to 150° C)	Indoor/Outdoor	O, W
Anodized Aluminum	-40° F to 302° F (-40° C to 150° C)	Indoor/Outdoor	O, W
Galvanized Steel	-40° F to 302° F (-40° C to 150° C)	Indoor/Outdoor	O, W
Alkyd Paint	-40° F to 257° F (-40° C to 125° C)	Indoor/Outdoor	O, W
Polyester Paint	-40° F to 257° F (-40° C to 150° C)	Indoor/Outdoor	O, W
Nylon Plastic	-40° F to 176° F (-40° C to 80° C)	Indoor/Outdoor	O, W
Melamine Plastic	-40° F to 176° F (-40° C to 80° C)	Indoor/Outdoor	O, W
Phenolic Plastic	-20° F to 212° F (-29° C to 100° C)	Indoor/Outdoor	O, W
Polystyrene	-40° F to 176° F (-40° C to 80° C)	Indoor/Outdoor	O, W
ABS Plastic	-40° F to 140° F (-40° C to 60° C)	Indoor/Outdoor	O, W
Polypropylene	176° F (80° C) No Cold Rating	Indoor Only	O, W
Polyethylene	140° F (60° C) No Cold Rating	Indoor Only	O, W
Polyester Urethane Powder Painted Cast Metal	-40° F to 212° F (-40° C to 100° C)	Indoor Only	W
Polyester Urethane Powder Paint	-40° F to 212° F (-40° C to 100° C)	Indoor Only	W

O - Occasional exposure to lubrication oils.

W - Where exposed to high humidity or occasional exposure to water.