



Liberty Marking Systems, Inc.

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Product Data Sheet

405 Silver Polyester Construction

Liberty 405 is a high performance metallized silver polyester label film construction. The base material is printed with a high performance film ink to the proper color and laminated with a thermal transfer printable overlaminates. The stock resists tearing, abrasion and heat. The durable topcoat resists smudging and abrasion when printed with resin based thermal transfer ribbons.

A high performance acrylic adhesive provides a permanent bond to a wide range of surfaces.

The release liner is a standard roll label liner compatible with most thermal transfer printers.

Liberty 405 is UL Recognized for indoor and outdoor use, with limited exposure to lubricating oil and water. For further information on printer and ribbon combinations please reference file # MH25432 or contact your Liberty Marking Systems representative. The temperature limits of the recognition are listed below.

| Surface | Temperature Limits | Recognition |
|--|-------------------------------------|----------------|
| Stainless Steel | -20° F to 302° F (-29° C to 150° C) | Indoor/Outdoor |
| Aluminum | -40° F to 302° F (-40° C to 150° C) | Indoor/Outdoor |
| Galvanized Steel | -40° F to 302° F (-40° C to 150° C) | Indoor/Outdoor |
| Alkyd Enamel | -40° F to 302° F (-40° C to 150° C) | Indoor/Outdoor |
| Polyester Paint | -20° F to 302° F (-29° C to 150° C) | Indoor/Outdoor |
| Acrylic Paint | -40° F to 302° F (-40° C to 150° C) | Indoor/Outdoor |
| Porcelain | -20° F to 302° F (-29° C to 150° C) | Indoor/Outdoor |
| Nylon | -20° F to 212° F (-29° C to 100° C) | Indoor/Outdoor |
| Melamine Plastic | -20° F to 212° F (-29° C to 100° C) | Indoor/Outdoor |
| Polycarbonate | -20° F to 212° F (-29° C to 100° C) | Indoor/Outdoor |
| Phenolic Plastic | -20° F to 212° F (-29° C to 100° C) | Indoor/Outdoor |
| Polystyrene | -20° F to 176° F (-29° C to 80° C) | Indoor/Outdoor |
| ABS Plastic | -40° F to 176° F (-40° C to 80° C) | Indoor/Outdoor |
| Unsaturated Plastic (Thermoset Polyester) | -40° F to 176° F (-40° C to 80° C) | Indoor/Outdoor |
| Polypropylene | 80° C No Cold Rating | Indoor Only |



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.

405 Silver Polyester Construction

| | |
|---|--|
| Service Temperature Range See page 1 for exact surface | -40° F to 302° F (-40° C to 150° C) |
| Minimum Application Temperature | 50° F (10 C) |
| Expected Exterior Life | Two years |
| Storage Stability | Two years stored at 70° F (21° C) and 50% RH |

PHYSICAL CHARACTERISTICS

| | | |
|-----------|----------|----------------------|
| Thickness | Film | 3.4 mils +/- 10% |
| | Adhesive | 0.8-0.9 mils +/- 0.1 |
| | Liner | 3.1 mils +/- 10% |

ADHESION PROPERTIES

| | Average oz/in (N/m) | Expected Range oz./in (N/m) | Test Method |
|---------------------------|------------------------|--------------------------------|--|
| Glass | 62 (682) | 55-80 (605-880) | PSTC 1 (Modified for 72 hr dwell time) |
| Acrylic | 57 (627) | 45-70 (495-770) | |
| Stainless Steel | 66 (726) | 55-75 (550-825) | |
| Expected Shear (hours) | 25 | | PSTC 7 (1 hr. dwell, 1 sq. in., 4 lb. load) |
| Tack (gm/sq cm) 125 | | | ASTM D 2979-71 |

Recommended thermal transfer ribbon: SONY TR4070 or TR5070.