



# Label Material 57816

## THERMAL TRANSFER POLYESTER LABEL MATERIAL

### CONSTRUCTION

(Calipers are nominal values.)

Facestock: 2.0 mil (50 micron) Gloss White Polyester

Adhesive: 0.8 mil (20 micron) Solvent Based Acrylic

Liner: 3.2 mil (81 micron) 90 gsm CCK

### FEATURES

- Facestock is topcoated for thermal transfer printing. Resin ribbons are recommended for optimum durability. The topcoat also provides improved ink anchorage for traditional forms of press printing.
- The solvent based adhesive is a firm acrylic adhesive that offers good adhesion on high and medium surface energy substrates.
- 90gsm CCK liner assures consistent die cutting and good layflat.

### APPLICATION IDEAS

- Barcode labels and rating plates.
- Property identification and asset labeling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.

### TYPICAL PHYSICAL PROPERTIES

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

**ADHESION:** 180° peel test procedure is ASTM D 3330.

Surface	Initial (10 Minute Dwell/RT)		Conditioned for 3 Days at Room Temperature 72°F (22°C)	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	50	55	57	62
Polycarbonate	47	51	56	61
ABS	43	47	51	56
Epoxy Poly-coated Panel	38	42	48	53

Surface	Conditioned for 3 Days at 120°F (49°C)		Conditioned for 24 hours at 90°F (32°C) at 90% Relative Humidity	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	51	56	49	54
Polycarbonate	53	58	50	55
ABS	50	55	45	49
Epoxy Poly-coated Panel	49	54	44	48

#### LINER RELEASE:

180° Removal of Liner from Facestock	<u>Rate of Removal</u> 90 inches/minute	<u>Grams/Inch Width</u> 6	<u>N/100 mm</u> 0.23
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#### ENVIRONMENTAL PERFORMANCE

The properties defined are based on four hours immersions at room temperature (72°F/22°C) unless otherwise noted. Samples were applied to stainless steel panels 24 hours prior to immersion.

#### Chemical Resistance:

	Appearance	Edge Penetration
Chemical	Visual	Millimeters
Isopropyl Alcohol	No change	I
Water for 48 hours	No change	0
pH 4	No change	0
pH 10	No change	0

#### Temperature Resistance:

300°F (149°C) for 24 hours:	no significant visual change
-40°F (-40°C) for 3 days:	no significant visual change

#### Humidity Resistance:

24 hours at 100°F (38°C) and 100% relative humidity:	no significant change in appearance or adhesion
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#### Shelf Life:

Two years from date of manufacture of product when properly stored at 72°F (22°C) and 50% relative humidity.

#### Ink Ribbon

Advent: 301 Black; 303 Black; 501 Black; 501 Red; 501 Blue; 501 Green  
 Armor: AXR-7; AXR-7+; AXR-600  
 Astromed™: R5  
 CPT™: 5440 Red; 5640 Blue; 5940 Black  
 Dasco: DR-74; DR-84  
 Great Ribbon: SDR  
 ICS: ICS-CC-4099.1  
 Iimak™: SH-36; SP-330; PrimeMark  
 Intermec: 053258-2; 054048-4  
 Japan Pulp and Paper: JP Resin 1; JP Resin 2 Blue; JP Resin 2 Red (suitable for indoor use only); JP Resin 2 Green (suitable for indoor use only)  
 Kurz™: K500; K501  
 Markem™: 716 (suitable for indoor use only)  
 Mid City Columbia™: CGL-80; CGL-80HE  
 NCR™: Matrix Resin; Matrix; PaceSetter; Promark II; Ultra V  
 Pelikan™: T016  
 Ricoh™: B110A; B110C; B110CX  
 Sato™: Premier 1  
 Sony™: 4070; 4072; 4075; 4085; 5070; Signature™ Series Resin; Signature™ Series

Wax  
UBI™: HR03; HR04  
Zebra™: 5095; 5099; 5100; 5175

## PROCESSING

- Printing:** Facestock is topcoated for improved ink receptivity and is designed for thermal transfer printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing.
- Die Cutting:** Rotary die cutting is recommended. Fanfolding of labels is not recommended. Small labels should be evaluated carefully. Winding tensions should be kept at a minimum to help prevent the adhesive from oozing.
- 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.

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 50°F (10°C), can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

### Technical Information and Data

The technical information and data, recommendations, and other statements provided are based on tests or experience which 3M believes to be reliable, but the accuracy or completeness of such information is not guaranteed.

### Product Use

Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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