Thermal Transfer Polyester Label Material

57801

Technical Data Sheet **Temporary**

Product Description

3M™ Thermal Transfer Polyester Label Materials 57801 are matte silver polyester label stocks. These label products can resist oozing and provide high strength on a variety of surfaces including high surface energy (HSE) plastics and metals.

Construction

(Calipers are nominal values.)

Product	Facestock	Adhesive	Liner
3M label material 57801	2.0 mil (51 micron) Matte silver polyester	0.8 mil (20 micron) Acrylic	80gsm White Glassine liner

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.

• Adhesive is a firm adhesive which resists oozing and provides high strength on a variety of surfaces including high surface energy (HSE) plastics and metals.

• 3M™ label material 57801 80gsm Glassine liner assures consistent die cutting and good layflat.

3M™ Thermal Transfer Polyester Label Material
57801

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.

	Initial (10 Minute Dwell/RT)		Conditioned for 3 Days at Room Temperature 72°F (22°C)	
Surface	**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
EpoxyPoly-coated Panel	38	42	48	53

	Conditioned for 3 Days at 120°F (49°C)		Conditioned for 24 hours at 90°F (32°C) at 90% Relative Humidity	
Surface	**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

Product	Rate of Removal	Gram/Inch Width	N/100 mm
3M™ Thermal Transfer Polyester Label Material 57801	90 inches/minute	6	0.23

3M™ Thermal Transfer Polyester Label Material
57801

Environmental Performance

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

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 180° peel angle (ASTM D 3330) at 12 inches/minute.

Chemical Resistance:

	Appearance	Edge Penetration
Chemical	**Visual**	**Millimeters**
Isopropyl Alcohol	No change	1
Water for 48 hours	No change	0
pH 4	No change	0
pH 10	No change	0

Temperature Resistance: When applied to stainless steel. Other substrates should be tested per application.

300°F (149°C) for 24 hours:	no significant visual change 0.7% MD shrinkage 0.8% CD shrinkage
-40°F (-40°C) for 10 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

3M™ Thermal Transfer Polyester Label Material
57801

Application Techniques

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

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.

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

Application Ideas

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

Agency Listing Information

Thermal Transfer Printing

Printer: UL no longer requires evaluation and listing of specific printers.

Ink Ribbon/UL Recognized Components

Advent: 301 Black; 303 Black; 501 Black; 501 Red; 501 Blue; 501 Green

Armor: AXR-7; AXR-7+; AXR-600

Astromed: R5

CP: 5440 Red; 5640 Blue; 5940 Black

Dasco: DR-74; DR-84

Great Ribbon: SDR

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

3M™ Thermal Transfer Polyester Label Material
57801

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.

Storage

Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.

Shelf Life

If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

Product Use

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