



76923 3M TT2 Radiant CM592-350E/27-36SP

Radiant Colour Change Labelstock

Product Data Sheet (Provisional)

Issued	:	October 2005
Supersedes	:	February 2003

Physical Properties

Not for specification purposes
(Calipers are nominal values)

Facestock	33 µm CM592 Radiant polyester
Adhesive	27 micron #350E Acrylic
Liner	36 micron Polyester
Shelf Life	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity.

Features:

- Facestock uses unique 3M film technology to produce varying colour effects under different viewing conditions. Different colour effects can be achieved by the introduction of alternative backgrounds.
- 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.
- 350E 3M's most universal labelstock adhesive offers excellent adhesion, even on low surface energy substrates, combined with excellent temperature and chemical resistance.
- Polyester liner contributes towards improved die cutting and excellent high speed label application.

Application Ideas:

- Unique decorative labels for consumer and industrial products.

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**Performance
Characteristics**

Not for specification purposes

Adhesion	90°Peel Adhesion, Test procedure FTM 2			
	Initial (20 Minute Dwell/RT)		Ultimate Adhesion 72 Hours Dwell at 70° C	
	N/10mm	Oz/In	N/10mm	Oz/In
Aluminium	4.1	36	5.5	50
Stainless Steel	4.3	39	6.5	58
Phenolic	4.0	36	5.0	45
ABS	4.1	36	5.2	47
Polycarbonate	4.2	38	4.8	43
Polystyrene	4.1	36	4.4	40
Polypropylene	3.2	29	4.3	39
HD Polyethylene	2.4	22	3.0	27
LD Polyethylene	3.2	29	3.4	30
Powder Coating	3.4	33	5.4	49

Surface	Conditioned for 3 Days at - 40°C	
	90° Peel	
	N/10mm	Oz/In
Aluminium	3.7	33
Stainless Steel	4.7	42
Phenolic	4.0	36
ABS	4.4	40
Polycarbonate	4.3	39
Polystyrene	4.4	40
Polypropylene	3.8	34
HD Polyethylene	2.3	21
LD Polyethylene	3.0	27
Powder Coating	4.5	41

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**Performance
Characteristics Contd.**

Temperature Resistance	149°C for 24 hours:	no significant visual change 0.4% MD shrinkage 0.6% 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

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	Visual	Millimetres
Heptane	4.8	43	No change	3
IPA	4.0	36	No change	1
Teepol Detergent	4.3	39	No change	0
PH 4	3.9	35	No change	0
PH 10	4.2	38	No change	0

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Thermal Transfer Printing

Excellent thermal transfer printed images have been obtained with the following ribbons:-

Armor: , AXR 7+, AXR 8+
 Ricoh™: B110C, B110 CX
 Sony™: TR 4070, TR 5070
 Keymax Alpha
 Astromed R5, RY
 Kurz 501
 limak SP 360

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 5°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.

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

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