



Technical Data Sheet

3M™ Clear Polyester Durable Label Material FM1542



Additional Info

Product Description

3M™ Clear Polyester Durable Label Material FM1542 is a durable, high performance material that offers thermal stability and moisture resistance. This label product utilizes 3M™ Adhesive R3500, which is designed for use on smooth surfaces such as glass, metal and plastic (including polystyrene) and offers UV resistance, initial tack, and long term adhesion with clean removability and is an alternative to static cling.

Note: As a removable adhesive, performance may vary depending upon the substrate to which it is applied. Therefore, extensive testing should be conducted prior to use and textured surfaces should be avoided. Not appropriate for children's toy or sticker applications.

Product Features

- initial tack.
- Long term adhesion with clean removability.
- Repositionable.
- UV resistance.
- Liner is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.

Technical Information Note

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

Typical Physical Properties

Attribute Name	Value
Adhesive Type	R3500 Rem. 16
Facestock	Clear Polyester TC
Conformability	Semi-rigid - Label is suitable for flat or slightly curved surfaces.
Adhesive Coat Weight	1.55 g/100 in ² ± 10%

Attribute Name	Value
Facestock Thickness	0.051 mm (2 mil)
Liner	50# SC semi-bleached super calendered kraft sheet
Liner Thickness	0.079 mm (3.1 mil)

Construction Tested

Adhesion properties determined per TLMI Method using 1.0 mil polyester with 0.9 mil of adhesive on a polished stainless steel panel.

Typical Performance Characteristics

Test Method: TLMI

Attribute Name	Temperature	Substrate	Value
180° Peel Adhesion	23 °C (73 °F)	Stainless Steel	0.53 N/cm (4.8 oz/in) ¹
Liner Release	23 °C (73 °F)		3 — 9.8 g/cm (15 — 50 g/2 in) ²
Loop Tack			8.8 N/cm (8 oz/in) ¹

¹ 300 mm/min (12 in/min)

² 180° removal, 300 in/min

Attribute Name	Value
Application Temperature	5 — 43 °C (40 — 110 °F)
Long Term Temperature Resistance	68 °C (155 °F) ¹
Minimum Long Term Temperature Resistance	-29 °C (-20 °F) ¹

¹ Long Term (day, weeks)

Attribute Name	Value
Note	Calipers are nominal values

Printing

Gloss topcoat is designed to be printable with a variety of film inks and thermal transfer ribbons. The following inks and thermal transfer ribbons have been evaluated and found to give adhesion when tested with 3M™ Tape 610 and 3M™ Tape 810. However, press conditions vary and proper evaluation using your specific conditions is critical and highly recommended for successful ink and ribbon adhesion.

Supplier UV Inks Ink Series Printing Process
XSYS Print Solutions UNV80071 Letterpress
USC50022 Screen
USC10031 Screen
Environmental Inks Ultra Kote 1800 OPV Flexo
Nazdar PSST-3952 Screen
Norcote 02-022, 80049, 02304, 021019 Screen

Water Based
XSYS Print Solutions HMF80071 Flexo
HMF90100 Flexo
MHF30004 Flexo
Water Ink Technologies WFLO 42976 Flexo
Environmental Inks Aqua Polyscreen Plus Flexo
Aqua Poly Cup Flexo
Wykoff Inks SCF 6551 Flexo

Solvent Based
Siegwerk Ink FCTB65L2 Flexo
FCTD65L4 Flexo
FCTE65L3 Flexo
FCTH65L5 Gravure
Nazdar GV124 Screen

Thermal Transfer Ribbon Supplier Ribbon Series Ribbon Type
Armor AXR7 + Resin
DNP W137-C Wax
M-250 Wax/Resin
R510-W Resin
iimak SP330, DC400 Resin
Prime Mark, PM350 Wax/Resin
Ricoh B110A Wax/Resin
BC110C Resin
Sony 3022, 4085 Plus Wax
4070 Resin (UV+)
4075 Resin

Handling/Application Information

Application Examples

Pre-mask/paint masking applications.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in a sealed plastic bag, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Information

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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