



Technical Data Sheet

3M™ Destructible Polyurethane Label Material 3812



[Product Details](#)

Product Description

3M™ Destructible Polyurethane Label Material 3812 is designed as a non-removable label material. The facestock is a destructible, non-shrink, opaque, white polyurethane film. Once applied with sufficient pressure and dwell time, one piece removal is not possible on most surfaces.

Product Features

- UL Recognized files MH11410 and MH16411

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	350
Facestock	Destructible White Polyurethane

Attribute Name	Test Method	Value
Total Tape Thickness	ASTM D3652	0.025 mm (1 mil)
Facestock Thickness		0.04 mm (1.6 mil)
Liner		90 g/m ² glassine paper
Liner Thickness		0.075 mm (3 mil)

Typical Performance Characteristics

180° Peel Adhesion

Temperature: 22 °C (72 °F)

Dwell Time	Substrate	Value
20 min	Acrylic (PMMA)	Destructible N/cm
20 min	AFERA Steel	Destructible N/cm
20 min	Aluminum	Destructible N/cm
20 min	Polycarbonate (PC)	Destructible N/cm
20 min	Polyester (PET)	Destructible N/cm
20 min	Polyethylene (PE)	3.1 N/cm
20 min	Polyvinyl chloride (PVC)	2.75 N/cm
24 h	ABS	Destructible N/cm
24 h	Acrylic (PMMA)	Destructible N/cm
24 h	AFERA Steel	Destructible N/cm
24 h	Aluminum	Destructible N/cm
24 h	Polycarbonate (PC)	Destructible N/cm
24 h	Polyester (PET)	Destructible N/cm
24 h	Polyethylene (PE)	3.9 N/cm

Dwell Time	Substrate	Value
24 h	Polypropylene (PP)	Destructible N/cm
24 h	Polyvinyl chloride (PVC)	Destructible N/cm
24 h	Stainless Steel	Destructible N/cm

Attribute Name	Value
Short Term Temperature Resistance	150 °C (300 °F) ¹
Long Term Temperature Resistance	120 °C (248 °F) ²
Minimum Long Term Temperature Resistance	-40 °C (-40 °F) ²

¹ Short Term (minutes, hour)

² Long Term (day, weeks)

Attribute Name	Temperature	Value
Elongation at Yield (Down Web)		5 %
Shrinking Resistance	120 °C (248 °F)	7 days - no effect

Typical Environmental Performance

180° Peel Adhesion

Dwell Time	Environmental Condition	Value
5 min	Immersion in Toluene for 5 min	No Change N/cm
5 min	Immersion in Ethanol for 5 min	No Change N/cm
10 min	Immersion in Xylene for 10 min	No Change N/cm
8 h	Immersion in 30% Sulfuric Acid for 8 hr	No Change N/cm
8 h	Immersion in 10% Caustic Soda for 8 hr	No Change N/cm
8 h	Immersion in 200°F Water(95°C) for 8 hr	No Change N/cm
24 h	Immersion in Motor Oil for 24 hr	No Change N/cm
24 h	Immersion in Diesel Fuel for 24 hr	No Change N/cm
24 h	Immersion in Detergent for 24 hr	No Change N/cm
24 h	Immersion in Antifreeze Solution for 24 hr	No Change N/cm

Printing

3M™ Destructible Polyurethane Label Material 3812 is suggested for screen printing processes using appropriate inks. Sheet screen printing must be evaluated depending on size and actual conditions.

The following inks were found to have good results but should be evaluated on a case by case basis for harsh conditions.

Flexo:Water Based - Akzo Nobel:Hydrofilm,Hydrokett, Thermokett TC,
Aarberg:Series 53-1

Flexo:UV - Akzo Nobel:Flexocure after corona treatment
Aarberg:Series 39-2
Sun Chemical :Bargoflex UV Inks 67,75

Letter Press:UV - Aarberg: Series 32-2, 41-2 inks after corona treatment

Thermal Transfer
Printers Ribbons

Zebra Z 90,91,130,140 ICS-CC 4099-1, Zebra 5175, Ricoh B 110A, Armor AXR 7 + (Iimak SH 36), Armor AXR8
Datamax Prodigy Plus ICS-CC 4099-1,Ricoh B 110A, Armor AXR 7 + (Iimak SH 36), Armor AXR8
TEC B 602, B 402, B 65, B 30 ICS-CC 4099-1, Ricoh B 110A, Armor AXR 7 + (Iimak SH 36), Armor AXR8
Sato 8400,8450 ICS-CC 4099-1, Ricoh B 110A, Armor AXR 7 + (Iimak SH 36), Armor AXR8

New Printer/ribbon combinations should be evaluated with lowest print speed and highest burn temperature and changed accordingly.

Converting

3M™ Destructible Polyurethane Label Material 3812 features a smooth, hard, caliper controlled liner with good kiss cutting characteristics. Weed stripping is recommended using a 25 mm idler. For better handling, we recommend label formats with rounded corners, length of label in machine direction, minimum 3 mm between labels and minimum 10 mm liner-supported waste matrix sidebars.

Handling/Application Information

Application Examples

- Tamper evident label material for theft/fraud prevention
- Non-vinyl material can be laser die cut

Industry Specifications

UL Recognized, File PGGU2.MH11410, Marking & Labeling System Materials - Component, ANSI/UL 969
UL Recognized, File PGJ12.MH16411, Printing Materials - Component, ANSI/UL 969

Storage and Shelf Life

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

Information

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ISO Statement

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