



Destructible Polyurethane Label Material 3812

Technical Data

July 2017

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 Construction	Facestock	Adhesive	Liner
	0.0016 in. Clear Polyester Liner (40 microns)	0.001 in. 350 Adhesive (25 micron)	0.003 in. 90 g/m ² glassine paper(75 micron)

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.

Tensile Stress at Yield (Down Web)	< 27.5 N/10mm
Elongation at Yield (Down Web)	< 5 %
Liner Release	2.75-9 cN/10mm
Temperature Resistance	-40°F (-40°C) to 248°F (120°C) Short term 300°F (150°C)
Shrinking Resistance	248°F (120°C)/7 days – no effect

Application Ideas

- Tamper evident label material for theft/fraud prevention
- Non-vinyl material can be laser die cut
- UL Recognized File MH16411 and CSA 99316

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Adhesion Performance

180° Adhesion (N/10 mm)		
Substrate	Peel Adhesion (20 min)	Peel Adhesion (24 hours)
Aluminum	Destructible	Destructible
Stainless Steel	Destructible	Destructible
AFERA Steel	Destructible	Destructible
Polyethylene	3.1	3.9
Polypropylene	0.39	Destructible
PVC	2.75	Destructible
PET	Destructible	Destructible
PC	Destructible	Destructible
ABS	Destructible	Destructible
PMMA	Destructible	Destructible

Resistance to Chemicals And Solvents

180° Adhesion (N/10 mm)		
Chemical	Duration of Immersion	Result
Detergent	24 Hours	No Change
Antifreeze Solution	24 Hours	No Change
Diesel Fuel	24 Hours	No Change
Motor Oil	24 Hours	No Change
200°F Water(95°C)	8 Hours	No Change
30% Sulfuric Acid	8 Hours	No Change
10% Caustic Soda	8 Hours	No Change
Xylene	10 minutes	No Change
Ethanol	5 minutes	No Change
Toluene	5 minutes	No Change

Cutting

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.

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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)
Datamax Prodigy Plus	ICS-CC 4099-1,Ricoh B 110A, Armor AXR 7 + (Iimak SH 36)
TEC B 602, B 402, B 65, B 30	ICS-CC 4099-1, Ricoh B 110A, Armor AXR 7 + (Iimak SH 36)
Sato 8400,8450	ICS-CC 4099-1, Ricoh B 110A, Armor AXR 7 + (Iimak SH 36)

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

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Storage Store under normal conditions of 70°F (21°C) and 50% R.H.

Shelf Life To obtain best performance, use this product within 24 months from date of manufacture.

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