

July, 2017

3M™ Destructible Polyurethane Label Material 3812

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.



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

Property	Values	
Adhesive Thickness	0.025 mm	1 mil
Facestock	Clear Polyester Liner	
Facestock Thickness	0.04 mm	1.6 mil
Adhesive Type	350	
Liner	90 g/m ² glassine paper	
Liner Thickness	0.075 mm	3 mil

Note

Calipers are nominal values

Typical Performance Characteristics

Property	Values		Test Condition
Tensile Stress at Yield (Down Web)	<27.5 N/cm		
Elongation at Yield (Down Web)	5 %		
Temperature Resistance	-40 to 120 °C	-40 to 248 °F	
Short Term Temperature Resistance	150 °C	300 °F	
Shrinking Resistance	7 days - no effect		248°F (120°C)

180° Peel Adhesion	Dwell/Cure Time	Substrate
Destructible N/cm	20min	Aluminum
Destructible N/cm	24hr	Aluminum
Destructible N/cm	20min	Stainless Steel
Destructible N/cm	24hr	Stainless Steel
Destructible N/cm	20min	AFERA Steel
Destructible N/cm	24hr	AFERA Steel

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Typical Performance Characteristics (continued)

180° Peel Adhesion	Dwell/Cure Time	Substrate
3.1 N/cm	20min	Polyethylene
3.9 N/cm	24hr	Polyethylene
0.39 N/cm	20min	Polypropylene (PP)
Destructible N/cm	24hr	Polypropylene (PP)
2.75 N/cm	20min	PVC
Destructible N/cm	24hr	PVC
Destructible N/cm	20min	PET
Destructible N/cm	24hr	PET
Destructible N/cm	20min	PC
Destructible N/cm	24hr	PC
Destructible N/cm	20min	ABS
Destructible N/cm	24hr	ABS
Destructible N/cm	20min	PMMA
Destructible N/cm	24hr	PMMA

Property: 180° Peel Adhesion

Resistance to Chemicals and Solvents

180° Peel Adhesion	Environmental Condition
No Change N/cm	Immersion in Detergent for 24 hr
No Change N/cm	Immersion in Antifreeze Solution for 24 hr
No Change N/cm	Immersion in Diesel Fuel for 24 hr
No Change N/cm	Immersion in Motor Oil for 24 hr
No Change N/cm	Immersion in 200°F Water(95°C) for 8 hr
No Change N/cm	Immersion in 30% Sulfuric Acid for 8 hr
No Change N/cm	Immersion in 10% Caustic Soda for 8 hr
No Change N/cm	Immersion in Xylene for 10 min
No Change N/cm	Immersion in Ethanol for 5 min
No Change N/cm	Immersion in Toluene for 5 min

Property: 180° Peel Adhesion

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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.

Handling/Application Information

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

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

Zebra Z 90,91,130,140

Datamax Prodigy Plus

TEC B 602, B 402, B 65, B 30

Sato 8400,8450

Ribbons

ICS-CC 4099-1, Zebra 5175, Ricoh B 110A, Armor AXR 7 + (limak SH 36)

ICS-CC 4099-1,Ricoh B 110A, Armor AXR 7 + (limak SH 36)

ICS-CC 4099-1, Ricoh B 110A, Armor AXR 7 + (limak SH 36)

ICS-CC 4099-1, Ricoh B 110A, Armor AXR 7 + (limak SH 36)

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

Storage and Shelf Life

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

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

References

1. Safety Data Sheet

Url: https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=3812

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

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