

August, 2016

3M™ Double Coated Polyester Tape L1 + DCP

Product Description

The L1 adhesive platform features a modified acrylic adhesive with good initial tack and peel adhesion to many open cell foam substrates. The 3M L1 tapes are designed to withstand temperatures up to 200°F (93°C) and bond well to a wide range of foam substrates, including Polyurethane (PU) foam, Cross-Linked Polyethylene (PE) foam, and Microcellular Urethane foam. All L1 constructions feature a white 74# densified kraft (DK) liner for excellent processing.

Product Features

- The L1 adhesive is a modified acrylic adhesive that withstands temperatures up to 200°F (93°C).
- Adhesive offers good initial tack and peel adhesion to many open cell foam materials.
- Bonds well to polyurethane (PU) foam, cross-linked polyethylene (PE) foam, and microcellular urethane foam.
- An 74# white colored, unprinted densified kraft (PCK) liner for excellent processing.



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1-800-773-0062

3M™ Double Coated Polyester Tape L1 + DCP

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	0.097 mm	3.5 mil
Liner	74# DK	
Liner Thickness	0.103 mm	4.1 mil
Liner Color	White	
Product Construction	L1+DCP is a 3.5 mil double-coated polyester (PET) tape which provides added dimensional stability and improved handling during laminating or die cutting processes, particularly on thin or flexible substrates. An adhesive coat weight of 1.5 mils on each side of a 0.50 mil PET carrier provides good adhesion to many foam substrates.	

Typical Performance Characteristics

Property	Values	Method	Dwell/Cure Time	Test Condition	Notes
Static Shear	1,088 min	ASTM D3654	72 hr	1000 g @ Room Temperature	1 in ² sample size
Static Shear	3 min	ASTM D3654	72 hr	1000 g @ 70°C (158°F)	1 in ² sample size

T-Peel Adhesion to Foam (Faceside)		Substrate	Failure mode
1.5 N/cm	14 oz/in	Polyurethane Foam	POF
5.3 N/cm	48 oz/in	Microcellular Urethane	FT
5.1 N/cm	47 oz/in	Cross-linked Polyethylene	FT

Property: T-Peel Adhesion to Foam (Faceside)

Method: ASTM D1876

Dwell/Cure Time: 72 hr @ Room Temperature

Backing: Polyester Film

notes: POF=Pop Off Foam, FT=Foam Tear, FP=Foam Picking

Typical Performance Characteristics (continued)

Backside 90° Peel Adhesion		Substrate
4.2 N/cm	38 oz/in	Aluminum
4.4 N/cm	40 oz/in	Stainless Steel
3.7 N/cm	34 oz/in	Polypropylene (PP)
4.3 N/cm	39 oz/in	ABS

Property: Backside 90° Peel Adhesion
 Method: ASTM D3330
 Dwell/Cure Time: 72 hr @ Room Temperature
 Backing: Aluminum Foil

Available Sizes

Property	Values	
Note	Subject to Minimum Order Requirements	
Standard Roll Length	230 m	251 yd
Available Width	1000, 1372, 1524 mm	39, 54, 60 in
Normal Slitting Tolerance	±0.8 mm	±1/32 in
Core Size (ID)	76.2 mm	3 in

Environmental Performance

Temperature Resistance: The L1 adhesive family is usable for short periods (minutes, hours) at temperatures up to 200°F (93°C) and for intermittent longer periods of time (days, weeks) up to 150°F (66°C).

Lower Service Temperature: -40°F (-40°C)

Humidity Resistance: High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

Handling/Application Information

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application will assist the adhesive in developing intimate contact with the bonding surface.

To obtain optimum adhesion, the bonding surfaces must be clean, dry, and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*

Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

Storage and Shelf Life

Store in original cartons at 70°F (21°C) and 50% relative humidity.

If stored under proper conditions, product retains its performance and properties for 24 months from the date of manufacture.

Trademarks

3M is a trademark of 3M Company.

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Family Group

	L1 + DCP	L1 + RT
Adhesive Thickness (mm)	0.097	0.081
Liner	74# DK	74# DK
Liner Thickness (mm)	0.103	0.103
Liner Color	White	White

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=L1 + DCP

ISO Statement

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

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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