Technical Data Sheet

3M™ Scrim Reinforced Adhesive Transfer Tape L1 + RT

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.

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
Product Construction	L1+RT adhesive transfer tape is reinforced with a high density scrim carrier to boost dimensional stability during lamination processes. An adhesive coat weight of 3.2 mils allows the adhesive to flow and ensures good bond strength even around tight radiuses and contoured surfaces.

Attribute Name	Test Method	Value
Adhesive Type		Acrylic
Total Tape Thickness	ASTM D3652	0.081 mm (3.2 mil)
Liner		74# DK
Liner Thickness		0.103 mm (4.1 mil)
Primary Liner Color		White

Typical Performance Characteristics

90° Peel Adhesion

Temperature: 22 °C (72 °F)
Test Condition: Backside
Dwell Time: 72 h
Backing: 2 mil Aluminum Foil
Test Method: ASTM D3330

Substrate	Value
ABS	5.5 N/cm (50 oz/in) [1]
Aluminum	5.1 N/cm (47 oz/in) [1]
Polypropylene (PP)	4.7 N/cm (43 oz/in) [1]

Substrate	Value
Stainless Steel	5.3 N/cm (48 oz/in) [1]

[1] 12 in/min (300 mm/min)

T-Peel Foam Faceside

Temperature: 22 °C (72 °F)
Dwell Time: 72 h
Backing: 2 mil PET
Test Method: ASTM D1876

Substrate	Value
Cross-linked Polyethylene	2.7 N/cm (25 oz/in) [1]
Microcellular Urethane	3 N/cm (27 oz/in) (POF) [1]
Polyurethane Foam	4.2 N/cm (22 oz/in) (POF) [1]

[1] POF=Pop Off Foam, FT=Foam Tear, FP=Foam Picking

Static Shear

Test Condition: 1000g
Dwell Time: 72 h
Test Method: ASTM D3654

Temperature	Value
22 °C (72 °F)	34 min [1]
70 °C (158 °F)	<1 min [1]

[1] 1 in x 1 in sample area, test terminated after 10,000 minutes

Attribute Name	Value
Short Term Temperature Resistance	93 °C (200 °F) [1]
Long Term Temperature Resistance	66 °C (150 °F) [2]

[1] Short Term (minutes, hour)
[2] Long Term (day, weeks)

Typical Environmental Characteristics

Environmental Resistance

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.

Available Sizes

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

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Select Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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ISO Statement

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