



L2 Adhesive Family

L2+T3 • L2+T5 • L2+DCP • L2+DCD

Preliminary Technical Data

April, 2016

Product Description

The L2 adhesive platform features a proprietary 3M modified acrylic adhesive that withstands temperatures up to 225°F (107°C) and offers high initial tack, excellent peel adhesion and strength to many open and closed cell foams. It bonds well to Polyurethane (PU) Ether, PU Ester, cross-linked Polyethylene (PE) foam, EPDM foam, Neoprene foam, Nitrile foam, and microcellular urethane. All L2 constructions feature an 83# kraft coloured unprinted polycoated kraft (PCK) liner for superior processing.

Construction

L2+T3 is a 3-mil transfer tape that does not have a carrier, this enables it to provide maximum conformability and good adhesion to open and closed cell foam surfaces.

L2+T5 is a 5-mil transfer tape that shares the same benefits of L2+T3, but offers a 2 mil thicker coat weight to adhere to the most structured open and closed cell foam surfaces.

L2+DCP is a double-coated polyester tape that provides excellent adhesion to a wide variety of substrates, including many open and closed cell foams.

L2+DCD is a double coated differential tape that provides excellent adhesion to multiple different substrates. The first side (face side) provides great adhesion to many different open and closed cell foam surfaces, while the second side (backside) provides excellent adhesion to low surface energy (LSE) materials.

Product Name	Adhesive Thickness	Liner Color / Type	Liner Thickness
L2+T3	3.0 mils (0.076 mm)	Kraft / 83# PCK	6.2 mils (0.145 mm)
L3+T5	5.0 mils (0.127 mm)	Kraft / 83# PCK	6.2 mils (0.145 mm)
L2+DCP	4.8 mils (0.121 mm)	Kraft / 83# PCK	6.2 mils (0.145 mm)
L2+DCD	6.7 mils (0.170mm)	Kraft / 83# PCK	6.2 mils (0.145 mm)

Note: The adhesive caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.071 g/cc.

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Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Product Number	L2+T3	L2+T5	L2+DCP	L2+DCD
Adhesion to Substrates ASTM D3330 – 90 degree, 2 mil AL foil, 72 hour RT	Oz/in (N/25 mm) Backside	Oz/in (N/25 mm) Backside	Oz/in (N/25 mm) Backside	Oz/in N/25mm Backside
Stainless Steel	65 (18)	82 (23)	70 (19)	60 (17)
Aluminum	46 (13)	61 (17)	44 (12)	45 (13)
ABS	34 (10)	39 (11)	29 (8)	32 (9)
Polypropylene	35 (10)	42 (12)	37 (11)	33 (9)

Product Number	L2+T3	L2+T5	L2+DCP	L2+DCD
Adhesion to Foam ASTM D1876-08 T-Peel Adh. 2 mil PET, 72 hour RT	Oz/in (N/25 mm) Faceside	Oz/in (N/25 mm) Faceside	Oz/in (N/25 mm) Faceside	Oz/in N/25mm Faceside
EPDM Foam	32 (9)	35 (10)	32 (9)	30 (8)
Neoprene Foam	30 (8)	38 (11)	41 (11)	38 (1)
Cross-Linked PE Foam	42 (12)	46 (13)	53 (15)	45 (13)
Nitrile Foam	25 (7)	31 (9)	24 (7)	26 (7)

Static Shear Strength

ASTM D3654, Modified - (1 inch ² sample), 1000 gm Wt., 72hr dwell		
Product Name	Environmental Conditions (minutes)	
	72°F (22°C)	158°F (70°C)
L2+T3	10,000	1126
L2+T5	10,000	1383
L2+DCP	10,000	4780
L2+DCD	10,000	4311

Available Sizes

Roll Length, Width, Slitting Tolerance, Core Size.

Roll Widths	54 in (1372mm)
Roll Length	250 yards (229 m)
Slitting Tolerance	± 1/32 in. (0.08 mm)
Core Size (ID)	3.0 in. (76.2 mm)

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Features

- Proprietary 3M modified acrylic adhesive that withstands temperatures up to 225°F (107°C)
- Adhesive offers high initial tack to many open and closed cell foam materials
- Excellent peel adhesion and shear strength
- Bonds well to Polyurethane (PU) Ether, PU Ester, cross-linked Polyethylene (PE) foam, EPDM foam, neoprene foam, nitrile foam, & microcellular foam
- An 83# tan coloured, unprinted polycoated kraft (PCK) liner for superior processing

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm pressure during 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.

Environmental Performance

Temperature Resistance: The L2 adhesive family is usable for short periods (minutes, hours) at temperatures up to 225°F (107°C) and for intermittent longer periods of time (days, weeks) up to 170°F (77°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.

Storage

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

Shelf Life

If stored under proper conditions, product retains its performance and properties for 12 months from the date of shipment.

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