High Strength Double Coated Tape with Adhesive 300LSE

9475LEF • 9475LE • 9475LEB

Technical Data **February, 2007**

Product Description

3M™ Double Coated Tape 9475LEF, 9475LE and 9475LEB with 3M™ Adhesive 300LSE provides high bond strength to most surfaces, including many low surface energy plastics such as polypropylene and powder coated paints. The acrylic adhesive also provides excellent adhesion to surfaces contaminated lightly with oil typically used with machine parts.

Construction

Product Number	Faceside[1] Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside[2] Adhesive Type/ Thickness	Liner Type	Liner Caliper	Total Tape Thickness (w/o liner)
3M tape 9475LEF[3]	0.002" (0.051mm)	Clear PET 0.0005" (0.013mm)	0.002" (0.051mm)	Clear polyester	0.002" (0.051mm)	0.0045" (0.114mm)
3M tape 9475LE[3]	0.002" (0.051mm)	Clear PET 0.0005" (0.013mm)	0.002" (0.051mm)	#83 Polycoated Kraft	6.2 mils (0.157mm)	0.0045" (0.114mm)
3M tape 9475LEB[3]	0.002" (0.051mm)	Black PET 0.0005" (0.013mm)	0.002" (0.051mm)	#83 Polycoated Kraft	6.2 mils (0.157mm)	0.0045" (0.114mm)

Note 1: Faceside (FS) adhesive is on the interior of the roll, exposed when unwound.

Note 2: Backside (BS) adhesive is on the exterior of the roll, exposed when liner is removed.

Note 3: The caliper listed is based on a calculation from manufacturing controlled adhesive coated weights using a density of 1.012 g/cc. While past data pages have listed a nominal caliper of 6.0 mils for these tapes, the coat weight has not changed.

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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.

Adhesion to stainless steel ASTM D3330 - 180 degree 2 mil polyester as backing	**oz/in (N/100 mm)**
72 hour RT	88 (96)
Adhesion to stainless steel ASTM D3330 - 90 degree 2 mil al foil	
15 minute RT	79 (86)
72 hour RT	98 (96)
72 hour 158°F (70°C)	98 (107)
Adhesion to other surfaces ASTM D3330 - 90 degree, 2 mil al foil, 72 hour RT	
ABS	88 (96)
Polycarbonate	127 (139)
Glass	90 (98)
72 hour 158°F (70°C)	
ABS	70 (77)
Polycarbonate	72 (79)
Glass	86 (94)
Shear Strength - ASTM D3654 Modified – (.5 inch^2 sample size)	
1000 grams at 72°F (22°C)	>10,000 minutes
500 grams at 158°F (70°F)	>10,000 minutes
Relative High Temperature Operating Ranges:	
Long Term (days, weeks)	200°F (93°F)
Short Term (minutes, hours)	300°F (149°C)
Relative Solvent Resistance:	Very Good

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Features

- This tape has a film carrier which can add dimensional stability to foams and other substrates and also makes it easier to handle the tape during slitting and die- cutting.
- The bond strength of 3M™ Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.
- Features a polyester film liner for use in clean room and high speed automatic dispensing.

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), 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.

*****Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

Environmental Performance

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.

UV Resistance: When properly applied, nameplates and decorative trim parts are not adversely affected by exposure.

Water Resistance: Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

Temperature Cycling Resistance: High bond strength is maintained after cycling four times through:

4 hours at 158°F (70°C)
4 hours at -20°F (-29°C)
4 hours at 73°F (22°C)

Chemical Resistance: When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

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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 two years from date of manufacture.

Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.

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