



Double Coated Polyester Tapes

9490LE • 9495LE

Technical Data

February, 1999

Product Description

9490LE 0.006 in. (0.15 mm) thick Double Coated Film Tape

9495LE 0.006 in. (0.15 mm) thick Double Coated Film Tape

These tapes feature the high strength 3M™ Acrylic Adhesive 300LSE which provides high bond strength to most surfaces, including an excellent bond to many low surface energy plastics such as polypropylene and powder coated paints. This acrylic adhesive also provides excellent adhesion to surfaces contaminated lightly with oil typically used with machine parts. 3M™ Double Coated Polyester Tape 9490LE offers the added feature of 3M™ Acrylic Adhesive 300MP on one side to provide excellent bond strength to a variety of foam and sheet materials.

Construction

Product	9490LE	9495LE
Face Side Adhesive:	2.25 mil 300MP (0.057 mm)	2.25 mil 300LSE (0.057 mm)
Adhesive Carrier:	0.5 mil Polyester (0.013 mm)	0.5 mil Polyester (0.013 mm)
Backside Adhesive:	3.25 mil 300LSE (0.083 mm)	3.25 mil 300LSE (0.083 mm)
Release Liner:	58# Polycoated Kraft, Printed	58# Polycoated Kraft, Printed
Approximate Thickness:		
Release Liner	0.0042 in. (0.11 mm)	0.0042 in. (0.11 mm)
Tape Only	0.006 in. (0.15mm)	0.006 in. (0.015 mm)
Tape Color:	Clear	Clear

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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	9490LE	9495LE
Adhesion to Steel: (ASTM D3330)		
Faceside	70 oz./in. width (76 N/100 mm)	50 oz./in. width (55 N/100 mm)
Backside	55 oz./in. width (59 N/100 mm)	65 oz./in. width (71 N/100 mm)
Relative High Temperature Operating Ranges:		
Short Term: (Minutes, Hours)	300°F (148°C)	300°F (148°C)
Long Term: (Days, Weeks)	200°F (93°C)	200°F (93°C)
Relative Solvent Resistance:	Very Good	Very Good
Shelf Life of Tape In Roll Form:	24 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity.	

Typical Adhesion Properties

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

Peel Strength:

Peel Adhesion (ASTM D3330)
(90° Peel, Room Temperature Conditions)

Substrate	Product	15 Min. Dwell		72 Hr. Dwell	
		Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	9490LE Faceside	25	(27)	70	(76)
	Backside	45	(49)	55	(59)
	9495LE Faceside	30	(33)	50	(55)
	Backside	55	(61)	65	(71)
ABS	9490LE Faceside	25	(27)	40	(44)
	Backside	55	(59)	60	(66)
	9495LE Faceside	40	(44)	60	(66)
	Backside	60	(66)	80	(88)
Polypropylene	9490LE Faceside	20	(22)	25	(27)
	Backside	30	(33)	60	(66)
	9495LE Faceside	30	(33)	35	(38)
	Backside	40	(44)	50	(55)

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Application Techniques

- For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol.
Note: When using solvents, carefully read and follow the manufacturer's precautions and directions for use.
- Bond strength can also be improved with firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), causing the adhesive to develop intimate contact with the bonding surface.
- 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 for most pressure-sensitive adhesives because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

General Information

- 3M double coated tapes 9490LE and 9495LE have a moisture resistant polycoated kraft liner which can withstand high humidity conditions with minimal cockling or wrinkling.
- 3M double coated tapes 9490LE and 9495LE have a film carrier which can add dimensional stability to foams and other substrates. The carrier also makes it easier to handle the tape during slitting and die-cutting.

Environmental Performance

- Note:** The properties defined are based on the attachment of impervious faceplate materials (such as polyester or aluminum) to a stainless steel test surface.
- **Bond Build-up:** The bond strength of 3M™ High-strength Acrylic Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.
 - **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.
 - **U.V. 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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For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550. Address correspondence to: 3M Bonding Systems Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-809-750-3000. In Mexico, phone: 5-728-2180.

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Bonding Systems Division

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