3M™ Double Coated Tapes 9690 • 9690B • 9609

Product Description

3M™ Double Coated Tapes with 3M™ Laminating Adhesive 300MP feature a thin polyester film for dimensional stability and improved handling with ease of die cutting and laminating. 3M adhesive 300MP offers excellent adhesion to many plastics and good shear strength and provides exceptional temperature and chemical resistance that withstands tough application environments.

Construction

Product Number	Faceside[1] Adhesive Thickness	Carrier Type/ Thickness	Backside[1] Adhesive Thickness	Liner Color, Type, Print	Liner Caliper	Total Tape Thickness (w/o liner)
3M™ Double Coated Tape 9690	2.8 mil (0.071mm)	Clear PET[2] 0.5 mil (0.013mm)	2.3 mil (0.058mm)	Tan, 83#, Polycoated Kraft "3M"	6.2 mil (0.16mm)	5.5 mil (0.14mm)
3M™ Double Coated Tape 9690B	2.8 mil (0.071mm)	Black PET[2] 0.5 mil (0.013mm)	2.3 mil (0.058mm)	Tan, 83#, Polycoated Kraft "3M"	6.2 mil (0.16mm)	5.5 mil (0.14mm)
3M™ Double Coated Tape 9609	3.5 mil (0.089mm)	Clear PET[2] 2.0 mil (0.051mm)	3.5 mil (0.089mm)	Tan, 83#, Polycoated Kraft, no print	6.2 mil (0.16mm)	9.0 mil (0.23mm)

Note 1: Faceside adhesive is on the interior of the roll.
The caliper listed is based on a calculation from manufacturing controlled adhesion coat weights using a density of 1.012 g/cc.
Backside adhesive is on the exterior of the roll.

Note 2: PET (Polyester).

Features

- 3M™ Double Coated Tape 9690B has a black film carrier which provides opacity and visibility.
- 3M™ Double Coated Tape 9609 provides easier handling and good gap filling for rigid to rigid substrate bonding.

Application Ideas

- Cellular phone lens attachment
- Foam Lamination
- Nameplates
- Appliques
- Decorate Trim
- Thermal and sound dampening applications in the electronics and appliance industry.

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	3M™ Double Coated Tapes 9690, 9690B	3M™ Double Coated Tape 9609
Adhesion to stainless steel ASTM D3330 - 90 degree	Oz/in (N/cm) [kg/25.4 mm]	Oz/in (N/cm) [kg/25.4 mm]
- 15 minute RT	45 (4.9) [1.3]	75 (8.2) [2.1]
- 72 hour RT	115 (12.6) [3.3]	85 (9.3) [2.4]
- 72 hour 158°F (70°C)	115 (12.6) [3.3]	85 (9.3) [2.4]
ASTM D3330 - 180 degree, 2 mil Al foil		
- 72 hour RT	125 (13.7) [3.6]	100 (10.9) [2.8]
ASTM D3330 - 90 degree, 2 mil Al foil, 72 hour RT		
ABS	55 (6.0) [1.6]	60 (6.6) [1.7]
Polyester	50 (5.5) [1.4]	100 (10.9) [2.8]
Polycarbonate	50 (5.5) [1.4]	100 (10.9) [2.8]
Shear Strength - ASTM D3654 modified - (.5 inch^2 sample size)		
1000 grams at 72°F (22°C)	1500 minutes	1000 minutes
500 grams at 158°F (70°C)	500 minutes	620 minutes
Relative High Temperature Operating Ranges:		
Long Term (days, weeks)	200°F (93°C)	200°F (93°C)
Short Term (minutes, hours)	300°F (149°C)	300°F (149°C)
Dielectric Properties: 3M™ Double Coated Tape 9690 / 9690B		
Dielectric Strength	1025 volts/mil	Not Available
Breakdown Voltage	5700 volts	Not Available

Available Sizes

Roll length, width, slitting tolerance, core size.

Available Lengths (Subject to minimum order requirements)

Maximum Length		
1/2" to 63/64"	180 yd. (164 m)	–
3" to 48"	–	360 yd. (329 m)
1" to 54"	360 yd. (329 m)	–
Available Widths		
Minimum	1/2" (12.7 mm)	3" (76.2 mm)
Maximum	54" (1372 mm)	48" (1220 mm)
Normal Slitting Tolerance	±1/32" (0.8 mm)	±1/32" (0.8 mm)
Core Size	3.0" (76.2 mm)	6.0" (152.4 mm)

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.

***Note:** 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.

Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, *Lamination Techniques for Converters of Laminating Adhesives* (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-251-8634.

Adding Liners to 3M™ Double Coated Tapes with 3M™ Laminating Adhesive 300MP

1. Rotary processing, tape only, on a densified (outside of #4994) kraft liner. In this process the tape waste will stay with the 83# PCK liner, leaving adhesive die-cuts dispensable from the #4994 (densified kraft) liner.
2. Current process limitations prevent the supply of 3M™ Laminating Adhesive 300MP on a DK liner.

Environmental Performance

Humidity Resistance: High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for seven 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 to direct sunlight.

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.

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.

Certification/Recognition

MSDS: 3M has not prepared a MSDS for this product which is not subject to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, the product should not present a health and safety hazard. However, use or processing of the product in a manner not in accordance with the directions for use may affect its performance and present potential health and safety hazards.

TSCA: This product is defined as an article under the Toxic Substances Control Act and therefore, it is exempt from inventory listing requirements.

RoHs Complaint/REACH Compliant: This product complies with the European Union's "Restriction of Hazardous Substances" (RoHs) initiative and with European REACH regulations 2002/95/EC and 2005/618/EC.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-251-8634. Address correspondence to: 3M, Electronics Markets Materials Division, 3M Center, Building 225-3S-06, St. Paul, MN 55144-1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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