



Adhesive Transfer Tapes

with 420 Adhesive

F-9752PC • F-9755PC

Technical Data

December, 2001

Product Description

F-9752PC 0.002 in. (0.05 mm) thick Adhesive Transfer Tape

F-9755PC 0.005 in. (0.13 mm) thick Adhesive Transfer Tape

3M™ Adhesive Transfer Tapes **F-9752PC** and **F-9755PC** utilize the 420 high performance adhesive system. This offers the ability to make adhesive bonds at temperatures as low as 32°F (0°C). These products utilize a 58 lb. polycoated liner for moisture stability.

Construction

Tapes	F-9752PC	F-9755PC
Adhesive Type:*	420	420
Adhesive Carrier:	None	None
Release Liner:	Moisture Resistant Tan Paper	Moisture Resistant Tan Paper
Approximate Thickness:		
Release Liner	0.004 in. (0.10 mm)	0.004 in. (0.10 mm)
Tape Only	0.002 in. (0.05 mm)	0.005 in. (0.13 mm)
Tape Color:	Clear	Clear

*420 is a medium firm acrylic pressure-sensitive adhesive system. It features high adhesion to a variety of surfaces, excellent shear holding power, high temperature resistance and excellent UV resistance.

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.

Tapes	F-9752PC	F-9755PC
Adhesion to Steel: (ASTM D-3330)	40 oz./in. (43 N/100 mm)	55 oz./in. (60 N/100 mm)
Relative High Temperature Operating Ranges:		
Long Term (Days, Weeks):	300°F (149°C)	300°F (149°C)
Short Term (Minutes, Hours):	450°F (232°C)	450°F (232°C)
Relative Solvent Resistance:	Very Good	Very Good
U.V. Resistance:	Excellent	Excellent
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.	24 months

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Available Sizes	Tapes	F-9752PC	F-9755PC
Core Size (ID):		3.0 in. (76.2 mm)	3.0 in. (76.2 mm)
Available Lengths (Subject to Minimum Order Requirements) Standard:		60 yds. (54.9 m)	60 yds. (54.9 m)
Maximum Lengths at Available Widths: 1/2 in. to 1 in.		180 yds. (165 m)	180 yds. (165 m)
1 in. to Max.		360 yds. (329 m)	360 yds. (329 m)
Roll Width: Minimum:		1/2 in.	1/2 in.
Maximum:		54 in.	54 in.
Normal Slitting Tolerance:		± 1/32 in. (0.8 mm)	± 1/32 in. (0.8 mm)

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)
(180° Peel, Room Temperature Conditions)

Tapes	F-9752PC		F-9755PC	
	72 Hr Dwell		72 Hr Dwell	
Surface	oz./in	(N/100 mm)	oz./in	(N/100 mm)
Stainless Steel	40	(43)	70	(75)
Painted Metal	45	(48)	63	(68)
Glass	35	(38)	70	(75)
Polycarbonate	50	(54)	74	(65)
Acrylic	50	(54)	74	(65)
Epoxy	45	(48)	77	(83)
ABS	45	(48)	80	(86)
Polypropylene	25	(27)	40	(43)
L.D. Polyethylene	10	(11)	15	(16)
H.D. Polyethylene	15	(16)	25	(27)

Shear Strength:

Static Shear Adhesion (ASTM D3654)
(1" x 1" Area Contact – Aluminum to a Stainless Steel – 72 Hr. dwell)

Temperature		Load	F-9752PC, F-9755PC
°F	°C	Grams	Minutes to Failure
72	22	1,000	
158	70	500	
200	93	400	No Failures – Tests
250	121	300	Discontinued After
300	149	300	10,000 Min.
350	177	300	
450	232	200	

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Application Techniques

- Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improve bond strength.
- To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. **Note:** Be sure to follow the manufacturer's precautions and directions for use when using solvents.
- 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. 3M™ Adhesive Transfer Tapes F-9752PC and F-9755PC can be bonded at temperatures as low as 32°F (0°C).
- Ultimate bond strength can be accelerated by exposure of the bond to elevated temperatures, such as 150°F (66°C) for about one hour.

Application Ideas

- These tapes are ideal for joining a variety of similar and dissimilar materials where high bond strength and high temperature performance are required and are also ideal for many applications where excellent UV resistance is required.
- 2 mil thick tapes can generally be used for joining materials that are relatively smooth, thin and have low residual stress. For materials with a rough or textured surface, the thicker adhesive film of the 5 mil tapes would be more appropriate for evaluation.

Suggested Application Equipment

Note: Appropriate application equipment can enhance use of the tape. We suggest the following application equipment for the user's evaluation in light of the user's particular purpose and method of application.

Semi-automatic: S625 Pad Applicator
T646i and T646Wi Application System
T653 Continuous Laminator

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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 or visit www.3M.com/adhesives. Address correspondence to: 3M Engineered Adhesives 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: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Certification/Recognition

MSDS

3M has not prepared a MSDS for these products which are 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 products should not present a health and safety hazard. However, use or processing of the products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

TSCA

These products are defined as articles under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

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ISO 9002

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



Engineered Adhesives Division

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