



Low Fogging Adhesive Transfer Tapes

6032PC - 6032PL – 6035PC - 6035PL – 6038PC - 6038PL

Technical Data

October, 2002

Description

3M™ Low Fogging Adhesive Transfer Tapes 6032, 6035 and 6038 are pressure-sensitive transfer tapes which are specially formulated to be low fogging with good adhesion to many lower surface energy materials. These tapes are ideal for use in automotive interior applications.

Construction

Product	Tape 6032PC	Tape 6035PC	Tape 6038PC
Adhesive:	2.0 mils (51 microns) #300MP Acrylic Adhesive	5.0 mils (127 microns) #300MP Acrylic Adhesive	8.0 mils (203 microns) #300MP Acrylic Adhesive
Liner:	4.2 mils (107 microns) 58# Polycoated Kraft Paper	4.2 mils (107 microns) 58# Polycoated Kraft Paper	4.2 mils (107 microns) 58# Polycoated Kraft Paper
Product	Tape 6032PL	Tape 6035PL	Tape 6038PL
Adhesive:	2.0 mils (51 microns) #300MP Acrylic Adhesive	5.0 mils (127 microns) #300MP Acrylic Adhesive	8.0 mils (203 microns) #300MP Acrylic Adhesive
Liner:	6.2 mils (157 microns) 86# Polycoated Kraft Paper	6.2 mils (157 microns) 83# Polycoated Kraft Paper	6.2 mils (157 microns) 86# Polycoated Kraft Paper

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.

Flammability Test: (FMVSS 302/SAE J369)	Pass
Automotive Fogging Test: SAE J1756 @ 100°C	99
Adhesion:	ASTM D-3330 (modified) 90° Peel, 12"/minute (305 mm/minute), 2 mil aluminum foil to various surfaces.

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Typical Physical Properties and Performance Characteristics
(continued)

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

3M™ Low Fogging Adhesive Transfer Tapes 6032PC & 6032PL

Surface	15 Minute Dwell		72 Hour Dwell		72 Hour Dwell @ 158°F	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	65	71	80	88	102	112
Polycarbonate (High Surface Energy Plastic)	56	61	61	67	64	70
Polypropylene (Low Surface Energy Plastic)	NA	NA	51	56	45	49
ABS	NA	NA	62	68	44	48

3M™ Low Fogging Adhesive Transfer Tapes 6035PC & 6035PL

Surface	15 Minute Dwell		72 Hour Dwell		72 Hour Dwell @ 158°F	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	102	112	131	143	166	182
Polycarbonate (High Surface Energy Plastic)	89	97	96	105	67	73
Polypropylene (Low Surface Energy Plastic)	NA	NA	73	80	63	69
ABS	NA	NA	93	102	78	85

3M™ Low Fogging Adhesive Transfer Tapes 6038PC & 6038PL

Surface	15 Minute Dwell		72 Hour Dwell		72 Hour Dwell @ 158°F	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	165	181	210	230	247	270
Polycarbonate (High Surface Energy Plastic)	125	137	146	160	106	116
Polypropylene (Low Surface Energy Plastic)	NA	NA	96	105	82	90
ABS	NA	NA	143	157	120	131

Environmental Performance

Temperature Resistance:	Short term: 250°F (121°C).
Humidity Resistance:	No adverse effect on the bond after exposure to 100% relative humidity at 100°F (38°C).
U.V. Resistance:	Adhesive is resistant to oxidation and ozone when exposed to air or ultraviolet light.
Bond Build-Up:	The bond strength of the adhesive increases as a function of time and temperature.
Shelf Life:	Product retains its performance properties for two years from date of manufacture if properly stored at room temperature conditions of 72°F (22°C) and 50% relative humidity.

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Environmental Performance *(continued)*

Properties defined below are based on sample attachment to a stainless steel faceplate material with a 0.002 inch aluminum foil backing. Values are listed based on a 90° peel at 12 inches/minute (305 mm/minute) after a 24 hour dwell. This data is provided as a guideline for the effects on adhesion at the following conditions and should not be used for specification purposes.

Test Condition	Tapes 6032PC & 6032PL		Tapes 6035PC & 6035PL		Tapes 6038PC & 6038PL	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm	Oz./In.	N/100 mm
Unleaded Gas - 1 hr. @ R.T.	49	54	65	71	127	139
Methyl Ethyl Ketone - 1 hr. @ R.T.	50	55	39	43	93	102
Oil (10W30) - 72 hrs. @ 120°F (49°C)	78	85	114	124	179	196
Weak Acid (pH 4) - 4 hrs. @ R.T.	60	66	89	97	139	152
Weak Base (pH 10) - 4 hrs. @ R.T.	57	62	81	89	132	145
Water - 100 hrs. @ R.T.	76	83	134	147	139	152
7 days @ 90°F (32°C) and 90 R.H.	80	88	140	153	215	235
Sodium Chloride Solution (5%) - 72 hrs. @ R.T.	73	80	113	124	203	222
Ultraviolet Light - 30 days exposure	112	123	191	209	220	241
Temperature Cycling - 4 hrs. @ 158°F (70°C); 4 hrs. @ -20°F (-29°C); 16 hrs. @ R.T. - repeated three times	82	90	134	147	200	219

Available Sizes

1" - 3" (25.4 mm - 76.2 mm) Width: 60 yds (54.8 m) maximum roll size
 3" - 5" (76.2 mm - 127 mm) Width: 180 yds (165 m) maximum roll size
 5" - 60" (127 mm - 1524 mm) Width: 360 yds (329 m) maximum roll size
 Standard core size = 3" (76.2 mm) diameter
 Width tolerance = ± 1/32" (0.79 mm)
 Sizes other than above are negotiable

Application Techniques

- For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol.
Note: Follow the manufacturer's precautions and directions for use when using solvents.
- Bond strength can also be improved with firm application pressure and moderate heat causing the adhesive to develop intimate contact with the bonding surface.
- Ideal adhesive application temperature range is 70°F to 100°F (21°C to 38°C). This is not recommended for application to surfaces at temperatures below 50°F (10°C) because the adhesive becomes too firm to adhere readily. Once properly applied, low temperature holding is satisfactory.

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General Information

- 3M™ Low Fogging Adhesive Transfer Tapes meet OEM fogging specifications.
- Provides excellent bond to a wide variety of smooth surfaces.
- Excellent shear and peel values to both high and low energy surfaces (PP, ABS, painted metal).
- High initial tack for quick and easy assembly line application.
- High temperature resistance to withstand environmental conditions normally associated with automotive interiors.

Application Ideas

- Attaching a wide variety of vibration and sound damping materials.
- Attaching the wiring harness to the automobile headliner.
- Attaching interior panels.
- Attaching glass to rearview mirror assembly.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-223-7427 or visit www.3M.com/converter. 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.

Recognition/Certification

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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