



Adhesive Transfer Tapes

9770 • 9774HL

Technical Data

November, 2006

Product Description 3M™ Adhesive Transfer Tapes 9770 and 9774HL consists of a 3M™ Adhesive 300MP which is a hi-strength acrylic adhesive on a polycoated kraft liner.

Construction	Product	3M™ Adhesive Transfer Tape	
		9770	9774HL
Adhesive:		2.0 mil (51 microns) #300MP "Hi-Strength" Acrylic Adhesive	4.0 mil (102 microns) #300MP "Hi-Strength" Acrylic Adhesive
Liner:		4.2 mil (106 microns) 58# Polycoated Kraft	6.2 mil (157 microns) 83# Polycoated Kraft

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.

ASTM D-3330 (modified)
90 degree peel, 12 in./min. (305 mm/min.)
2 mil (0.051 mm) aluminum foil

Surface	3M™ Adhesive Transfer Tape	20 Minute Room Temperature Dwell	
		Oz./In.	N/100 mm
Stainless Steel	9770	41	45
	9774HL	48	53

Surface	3M™ Adhesive Transfer Tape	72 Hour Dwell		Ultimate Bond	
		Oz./In.	N/100 mm	Oz./In.	N/100 mm
Stainless Steel	9770	68	74	93	102
	9774HL	87	95	138	151
Polycarbonate	9770	40	44	27	30
	9774HL	70	77	34	37
Polypropylene	9770	37	41	36	39
	9774HL	44	48	40	44

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Environmental Performance

The properties defined are based on the attachment of impervious materials (such as aluminum) to an aluminum test surface.

Bond Build-up:

The bond strength of 3M™ Adhesive 300MP increases as a function of time and temperature and has very high initial adhesion.

UV Resistance:

When properly applied, nameplates and decorative trim parts are not adversely affected by moisture.

Humidity Resistance:

High humidity has minimal effect on adhesive performance. Bond strengths are generally higher after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

Water Resistance:

Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the bond actually shows an increase in strength.

Temperature Cycling Resistance:

Bond strength generally increases after cycling four times through:

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

Chemical Resistance:

When properly applied, nameplate and decorative trim parts attached with adhesive 300MP will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

Heat Resistance:

The 3M adhesive 300MP is usable for short periods (minutes, hours) at temperatures up to 250°F (121°C) and for intermittent longer periods of time (days, weeks) up to 150°F (66°C).

Available Sizes

Minimum Width:	1/2"	
Maximum Width:	54"	
	Width	Length
Roll Lengths:	1/2" to 63/64"	180 yds
	1" to 60"	360 yds
Width Tolerance:	± 1/32"	
Core Size:	3"	

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Features

- 3M™ Adhesive 300MP is very smooth and is suitable for bonding to most surfaces, including low surface energy plastics.
- Moisture stable liner.
- Good shear holding power at elevated temperatures.

Application Techniques

For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol. Consult manufacturer's Material Safety Data Sheet for proper handling and storage instructions. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

Bond strength also can be improved by applying firm pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), which causes the adhesive to develop intimate contact with the bonding surface.

Application Ideas

- Fabricated foam parts to contoured surfaces.
- Plastic nameplates or graphic overlays for use on low surface energy (LSE) plastics.
- Multiple die-cut parts on a common sheet for ease of application.
- Fabricated parts with end tabs for easy liner removal.
- Graphic or fabricated parts to surfaces such as wood, fabric, plastic, rubber and textured materials.

Storage

Store at room temperature conditions of 72°F (22°C) and 50% relative humidity. Storage in plastic bag is recommended.

Shelf Life

Product retains its performance and properties for two years from date of manufacture.

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Recognition/ Certification

MSDS: 3M has not prepared MSDSs for these products which are not subjected 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, these 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.

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.

3M

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