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September, 2017

3M™ Adhesive Transfer Tape 9671LE

Product Description

Finite Element Analysis (FEA) data is available for this product at: **3m.com/FEA**

3M™ Adhesive Transfer Tapes with 3M™ Low Surface Energy Acrylic Adhesive 300LSE provides high bond strength to most surfaces, including many low surface energy plastics such as polypropylene and powder coated paints. The acrylic adhesive also provides excellent adhesion to surfaces contaminated lightly with oil typically used with machine parts.

Product Features

- 3M™ Adhesive 300LSE is a hi-strength acrylic adhesive that provides a very high bond strength to most surfaces.
- Excellent bond to low surface energy plastics such as polypropylene and powder coatings.
- Excellent adhesion to lightly oiled surfaces typical of machine parts.
- Thickness range of 2.3, 3.6 and 5.2 mils for use on smooth, or rough surfaces.

3M™ Adhesive Transfer Tape 9671LE

Technical Information Note

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

Typical Physical Properties

Property	Values	
Adhesive Type	3M High Strength Acrylic Adhesive 300LSE	
Adhesive Thickness	0.058 mm	2.3 mil
Liner	83# Polycoated Kraft	
Liner Thickness	0.157 mm	6.2 mil

Typical Performance Characteristics

90° Peel Adhesion		Dwell/Cure Time	Dwell Time Units	Substrate	Notes
7.8 N/cm		15	min	Stainless Steel	
71 oz/in		15	min	Stainless Steel	12 in/min (300 mm/min)
7.7 N/cm	70 oz/in	15	min	ABS	12 in/min (300 mm/min)
7.5 N/cm	69 oz/in	15	min	Polypropylene (PP)	12 in/min (300 mm/min)
8.2 N/cm	75 oz/in	72	hr	Stainless Steel	12 in/min (300 mm/min)
8.6 N/cm	79 oz/in	72	hr	ABS	12 in/min (300 mm/min)
8.1 N/cm	74 oz/in	72	hr	Polypropylene (PP)	12 in/min (300 mm/min)

Property: 90° Peel Adhesion
Method: ASTM D3330
Temp C: 22C
Temp F: 72F
Environmental Condition: 52%RH
Backing: 2 mil Aluminum Foil

Available Sizes

Property	Values		Attribute Modifier
Normal Slitting Tolerance	±0.8 mm	±1/32 in	
Minimum Slit Width	12.7 mm	1/2 in	
Maximum Slit Width	1219 mm	54 in	
Core Size	76.2 mm	3 in	ID

Limitations

1/2 in to 63/64 in: Maximum 180 yd (165 m)
1 in to 54 in: Maximum 360 yd (329 m)

Environmental Resistance

The properties defined are based on the attachment of impervious faceplate materials (such as aluminum) to a stainless steel test surface.
Bond Build-up: The bond strength of 3M™ Adhesive 300LSE increased as a function of time and temperature, and has very high initial adhesion.
Humidity Resistance: High humidity has a 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, nameplates and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.
Temperature Resistance: 3M™ Adhesive 300LSE is usable for short periods (minutes, hours) at temperatures up to 300°F (148°C) and for intermittent longer periods of time (days, weeks) up to 200°F (93°C).
Lower Service Temperature: -40°F (-40°C).

Processing

Slitting and die-cutting: This adhesive is very aggressive and may be difficult to convert depending on your application requirements. Chilling the adhesive between 35°F and 50°F will improve the processability. In addition, dies can be lubricated with evaporative stamping oil. You may also refer to our Technical Bulletin on 3M™ Adhesive 300LSE converting. (70-0707-6205-2)
Roll Laminating: A combination of metal and rubber rollers with moderate pressure is recommended. Note: Please refer to the Technical Bulletin on slitting. (70-0709-3905-6)

Handling/Application Information

Application Ideas

- Plastic nameplates or graphic overlays for use on low surface energy plastics.
- Waste removed nameplates on a common sheet for ease of application.
- Attaching membrane switch assemblies to powder coated surfaces and low surface energy plastics.
- Graphic overlays with end tabs for easy liner removal.
- Graphic application to surfaces such as wood, fabric, plastic, where very high bond strength is required.
- Attaching identification material to lightly oily surfaces typical of machine parts.

Application Techniques

For maximum bond strength, the surface should be thoroughly cleaned and dried. Typical cleaning solvents are methyl ethyl ketone for metals or isopropyl alcohol for plastics. Carefully read and follow manufacturer's precautions and directions for use when using cleaning solvents.
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.

Storage and Shelf Life

Store at room temperature conditions of 70°F (21°C) and 50% relative humidity.
If stored properly, product retains its performance and properties for 24 months from date of manufacture.

Trademarks

3M is a trademark of 3M Company.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/company-us/all-3m-products/~/3M-Adhesive-Transfer-Tape-9671LE?N=5002385+3293240972&rt=rud
Safety Data Sheet (SDS)	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=9671LE

Family Group

	8132LE	8153LE	9453LE	9471LE	9472LE	9653LE	9671LE	9672LE
Adhesive Type	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE	3M High Strength Acrylic Adhesive 300LSE
Adhesive Thickness (mm)	0.058	0.091	0.091	0.058	0.132	0.091	0.058	0.132
Liner			58# Polycoated Kraft	58# Polycoated Kraft	58# Polycoated Kraft	83# Polycoated Kraft	83# Polycoated Kraft	83# Polycoated Kraft
Liner Thickness (mm)			0.107	0.102	0.107	0.157	0.157	0.157

ISO Statement

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001 standards.

Recognition/Certification

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

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