



Technical Data Sheet

3M™ High Strength Double Coated Tape
93020LE



[Product Details](#)



[Regulatory Info/SDS](#)

Product Description

Finite Element Analysis (FEA) data is available for this product at: [3m.com/FEA](https://www.3m.com/FEA)

3M™ Double Coated Tapes with 3M™ High Strength Acrylic Adhesive 300LSE provides a 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 with oil typically used with machine parts.

Product Features

- This tape has a film carrier which can add dimensional stability to foams and other substrates and also makes it easier to handle the tape during slitting and die-cutting.
- The bond strength of 3M™ Acrylic Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.

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

Attribute Name	Test Method	Test Condition	Value
Adhesive Type			300LSE Acrylic
Adhesive Carrier			Clear Polyester
Adhesive Thickness		Faceside	0.095 mm (3.7 mil) ¹
Carrier Thickness			0.012 mm (0.5 mil)
Adhesive Thickness		Backside	0.095 mm (3.7 mil) ²
Total Tape Thickness	ASTM D3652		0.2 mm (7.9 mil)
Liner			58# Polycoated Kraft Paper (PCK)
Liner Print			300LSE
Liner Thickness			0.11 mm (4.2 mil)
Primary Liner Color			Tan

¹ Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.

² Backside adhesive is on the exterior of the roll, exposed when liner is removed.

Typical Performance Characteristics

180° Peel Adhesion

Temperature: 22 °C (72 °F)

Backing: 2 mil Aluminum Foil

Test Method: ASTM D3330

Dwell Time	Substrate	Value
15 min	ABS	15.9 N/cm (145 oz/in) ¹
15 min	Polycarbonate (PC)	18.1 N/cm (165 oz/in) ¹
15 min	Polypropylene (PP)	17 N/cm (155 oz/in) ¹
15 min	Stainless Steel	17 N/cm (155 oz/in) ¹

Dwell Time	Substrate	Value
72 h	ABS	17 N/cm (155 oz/in) ¹
72 h	Polycarbonate (PC)	19.7 N/cm (180 oz/in) ¹
72 h	Polypropylene (PP)	19.2 N/cm (175 oz/in) ¹
72 h	Stainless Steel	18.6 N/cm (170 oz/in) ¹

¹ 12 in/min (300 mm/min)

Static Shear

Test Method: ASTM D3654

Temperature	Test Condition	Value
22 °C (72 °F)	1000g	>10,000 min ¹
70 °C (158 °F)	500g	>10000 min ¹

¹ 1 in x 1 in sample area, test terminated after 10,000 minutes

Attribute Name	Value
Short Term Temperature Resistance	149 °C (300 °F) ¹
Long Term Temperature Resistance	93 °C (200 °F) ²

¹ Short Term (minutes, hour)

² Long Term (day, weeks)

Typical Environmental Characteristics

Environmental Resistance

Humidity Resistance:High humidity has 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.

UV 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, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids, and alkalis.

Electrical and Thermal Properties

Attribute Name	Value
Breakdown Voltage	7,500 V

Handling/Application Information

Application Examples

- Foam to powder coated painted surfaces.
- Low surface energy plastic adhesion.

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. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*

*Note: Carefully read and 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 because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

Industry Specifications

FDA Statement

This product might be suitable for use in indirect food contact applications. Please see the applicable Regulatory Data Sheet for more information relating to FDA compliance.

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Available Sizes

Attribute Name	Width	Value
Core Size (ID)		76.2 mm (3 in)
Maximum Length	1 in to 3 in	329 m (360 yd)
Maximum Length	1/2 in to 63/64 in	164 m (180 yd)
Maximum Length	3 in to 48 in	329 m (360 yd)
Maximum Length	48 in to 54 in	329 m (360 yd)
Normal Slitting Tolerance		± 0.8 mm (± 1/32 in)
Note		Subject to Minimum Order Requirements

Automotive Disclaimer

Select Automotive Applications:

This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

Information

Technical Information: The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or

damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Disclaimer: 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit www.3M.com.

ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd

3M is a trademark of 3M Company.
©3M 2024 (6/24)