3M™ High Strength Double Coated Tape 9302OLE

Last Revision Date: May, 2022

Product Description

Finite Element Analysis (FEA) data is available for this product at: **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

Property	Values	Additional Information
Adhesive Type	Acrylic	
Adhesive Type	300LSE	View

Test Name: Faceside

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

Adhesive Type	300LSE	View

Test Name: Backside

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

Adhesive Carrier	Clear Polyester
Liner	58# Polycoated Kraft
Liner Thickness	0.11 mm

Liner Color	Tan	View
Test Name: Primary		
Carrier Thickness	0.012 mm	
Total Tape Thickness	7.9 mil	View
Test Method: ASTM D3652		
Total Tape Thickness	0.2 mm	View
Test Method: ASTM D3652		
Adhesive Thickness	0.095 mm	View
Test Name: Backside		
Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.		
Adhesive Thickness	3.7 mil	View
Test Name: Backside		
Notes: Backside adhesive is on the exterior of the roll, exposed when liner is removed.		
Adhesive Thickness	0.095 mm	View
Test Name: Faceside		
Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.		
Adhesive Thickness	3.7 mil	View
Test Name: Faceside		
Notes: Faceside adhesive is on the interior of the roll, exposed when unwound and liner removed.		
Carrier Thickness	0.5 mil	
Liner Print	300LSE	
Liner Thickness	4.2 mil	

Typical Performance Characteristics

Property	Values	Additional Information
Short Term Temperature Resistance	300 °F	

Short Term Temperature Resistance	149 °C	
Long Term Temperature Resistance	93 °C	
Long Term Temperature Resistance	200 °F	
Static Shear	>10,000 min	View

Test Method: ASTM D3654

Notes: 1 in² sample size

Static Shear	>10,000 min	View

Test Method: ASTM D3654

Notes: 1 in² sample size

180° Peel Adhesion	17 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	155 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	18.1 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polycarbonate (PC)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	165 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polycarbonate (PC)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	15.9 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	145 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	17 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	155 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 15.0
Dwell Time Units: min
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	18.6 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0

Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	170 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Stainless Steel
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	19.7 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polycarbonate (PC)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	180 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polycarbonate (PC)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	17 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: ABS
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	155 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F

Environmental Condition: 50%RH
Substrate: ABS
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	19.2 N/cm	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

180° Peel Adhesion	175 oz/in	View

Test Method: ASTM D3330

Dwell/Cure Time: 72.0
Dwell Time Units: hr
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Polypropylene (PP)
Backing: Aluminum Foil

Notes: 12 in/min (300 mm/min)

Available Sizes

Property	Values	Additional Information
Note	Subject to Minimum Order Requirements	
Maximum Length	164 m	View

Width: 1/2 in to 63/64 in

Maximum Length	180 yd	View

Width: 1/2 in to 63/64 in

Maximum Length	329 m	View

Width: 1 in to 3 in

Maximum Length	360 yd	View

Width: 1 in to 3 in

Maximum Length	329 m	View

Width: 3 in to 48 in

Maximum Length	360 yd	

View		
Width: 3 in to 48 in		
Maximum Length	329 m	View
Width: 48 in to 54 in		
Maximum Length	360 yd	View
Width: 48 in to 54 in		
Normal Slitting Tolerance	± 0.8 mm	
Normal Slitting Tolerance	± 1/32 in	
Core Size (ID)	76.2 mm	
Core Size (ID)	3 in	

Electrical and Thermal Properties

Property	Values	Additional Information
Breakdown Voltage	7500 V	

Typical Environmental Performance

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.

Storage and Shelf Life

Store in original cartons at 70°F (21°C) and 50% relative humidity.
If stored under proper conditions, these products retain their performance and properties for 24 months from date of manufacture.

Bottom Matter

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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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40070491/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=93020LE

ISO Statement

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

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