

April, 2009

## 3M™ Double Coated Urethane Foam Tape 4052

### Product Description

3M™ Double Coated Urethane Foam Tapes are conformable foams that offer high shear strength with a high temperature holding acrylic adhesive system for bonding to various types of surfaces for mounting, joining and holding.



# 3M™ Double Coated Urethane Foam Tape 4052

## 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		Notes	Attribute Modifier
Color	Black			
Thickness: Nominal	0.8 mm	31 mil		
Thickness Tolerance	0.64 to 1.02 mm	25 to 40 mil		
Adhesive Type	100		3M™ Adhesive 100 is a firm acrylic pressure sensitive adhesive system. It features high ultimate bond strength, very good high temperature and solvent resistance and very high shear holding power. Bond strength increases substantially with natural aging.	
Adhesive Carrier	Polyurethane Foam			
Foam Density	225 kg/m <sup>3</sup>	14 lb/ft <sup>3</sup>		
Liner Color	Green Plaid			Primary
Liner Thickness	0.08 mm	3 mil		

## Typical Performance Characteristics

Property	Values		Notes
Normal Tensile	515 kPa	75 lb/in <sup>2</sup>	("T" Block); 1 in <sup>2</sup> (6.45 cm <sup>2</sup> ); Jaw Speed 2 in/min (50 mm/min)
Tensile Strength	1550 kPa	225 lb/in <sup>2</sup>	
Elongation at Break	110 %		
Solvent Resistance	No apparent degradation when exposed to splash tests of most hydrocarbon solvents.		

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## 3M™ Double Coated Urethane Foam Tape 4052

### Typical Performance Characteristics (continued)

Property	Values		Notes
UV Resistance	No apparent degradation when exposed to 7 days in U.V. chamber.		
Cold Flex @ -20°F (-30°C)	No cracking when flexed around a 1/4 in (6.4 mm mandrel).		

Relative High Temperature Operating Ranges		Test Condition
193 °C	380 °F	Short Term (minutes, hours)
104 °C	220 °F	Long Term (days, weeks)

Property: Relative High Temperature Operating Ranges

Static Shear	Test Condition
1500 g	Room Temperature
750 g	49°C (120°F)
750 g	66°C (150°F)
750 g	93°C (200°F)

Property: Static Shear

### Available Sizes

Property	Values	
Note	Subject to Minimum Order Requirements	
Standard Roll Length	65.8 m	72 yd
Maximum Length	160 m	175 yd
Available Width	1168 mm	46 in
Normal Slitting Tolerance	±0.8 mm	±1/32 in

### Electrical and Thermal Properties

Property	Values	
Dielectric Strength	8 to 12 V/μm	
Thermal Conductivity	0.062 W/m/K	0.036 (btu-in)/(h-ft²-°F)

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## Handling/Application Information

### Application Ideas

The urethane foam tapes are generally ideal for interior applications or for exterior applications where the tape will be protected from the environment. The urethane foam is open cell.

3M™ Double Coated Urethane Foam Tape 4052 – Bond window to microwave oven doors, Mount electrical channel to wall surfaces

### 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. Typical surface cleaning solvents are isopropyl alcohol\* and water (rubbing alcohol) or heptane.
  - 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.
- \*Note: Be sure to follow the manufacturer’s precautions and directions for use when using solvents.

### Storage and Shelf Life

Store in original cartons at 70°F (21°C) and 50% relative humidity.  
To obtain best performance, use these products within 24 months from date of manufacture.

### Trademarks

3M is a trademark of 3M Company.

### References

Property	Values
3m.com Product Page	<a href="https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Double-Coated-Urethane-Foam-Tape-4052?N=5002385+3293241532&amp;rt=rud">https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Double-Coated-Urethane-Foam-Tape-4052?N=5002385+3293241532&amp;rt=rud</a>
Safety Data Sheet (SDS)	<a href="https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=4052">https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=4052</a>

### Family Group

	4004	4008	4016	4026	4032	4052	4056	4085
Relative High Temperature Operating Ranges (°C) Test Condition: Short Term (minutes, hours)	193	193	193	193	193	193	93	
Liner Color Attribute Modifier: Primary	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Tan
Relative High Temperature Operating Ranges (°C) Test Condition: Long Term (days, weeks)	104	104	104	104	104	104	52	
Color	Natural	Natural	Natural	Natural	Natural	Black	Black	Natural

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## 3M™ Double Coated Urethane Foam Tape 4052

### Family Group (continued)

	4004	4008	4016	4026	4032	4052	4056	4085
Thickness: Nominal (mm)	6.4	3.2	1.6	1.6	0.8	0.8	1.6	1.2
Thickness Tolerance (mm)	5.46 to 7.24	2.79 to 3.81	1.142 to 2.03	1.142 to 2.03	0.64 to 1.02	0.64 to 1.02	1.142 to 2.03	1 to 1.45
Adhesive Type	100	100	100	100	100	100	100	740
Adhesive Carrier	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam	Polyurethane Foam
Liner Thickness (mm)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

### ISO Statement

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

### Recognition/Certification

MSDS: 3M has not prepared MSDSs 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, 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.

## Information

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