

April, 2009

3M™ Double Coated Urethane Foam Tape 4016

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.

Product Features

- The natural colored urethane foam tape products vary in color from white to light yellow. The color will change to light yellow upon exposure to sunlight (ultraviolet radiation). This color change is normal and does not affect tape performance.



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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		Test Name
Color	Natural		
Thickness: Nominal	1.6 mm	62.5 mil	
Thickness Tolerance	1.142 to 2.03 mm	45 to 80 mil	
Adhesive Type	100		
Adhesive Carrier	Polyurethane Foam		
Foam Density	175 kg/m ³	11 lb/ft ³	
Liner Color	Green Plaid		Primary
Liner Thickness	0.08 mm	3 mil	

Typical Performance Characteristics

Property	Values		Notes	Test Condition	Temp C	Temp F
Normal Tensile	345 kPa	50 lb/in ²	("T" Block); 1 in ² (6.45 cm ²); Jaw Speed 2 in/min (50 mm/min)			
Tensile Strength	965 kPa	140 lb/in ²				
Elongation at Break	100 %					
Short Term Temperature Resistance	193 °C	380 °F		Short Term (minutes, hour)		
Long Term Temperature Resistance	104 °C	220 °F		Long Term (day, weeks)		

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Typical Performance Characteristics (continued)

Property	Values	Notes	Test Condition	Temp C	Temp F
Solvent Resistance	No apparent degradation when exposed to splash tests of most hydrocarbon solvents.				
UV Resistance	No apparent degradation when exposed to 7 days in U.V. chamber.				
Cold Flex	No cracking when flexed around a 1/4 in (6.4 mm mandrel).			-30C	-20F

Static Shear	Test Condition
1500 g	Room Temperature
1000 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	32.9 m	36 yd
Maximum Length	91 m	100 yd
Available Width	1168 mm	46 in
Normal Slitting Tolerance	±0.8 mm	±1/32 in

Electrical and Thermal Properties

Property	Values	
Dielectric Strength	2021-08-12 00:00:00 V/μm	
Thermal Conductivity	0.062 W/m/K	0.036 (btu-in)/(h-ft²-°F)

Handling/Application Information

Application Examples

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 4016 – Mount interior signs and nameplates

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	https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Double-Coated-Urethane-Foam-Tape-4016/?N=5002385+3293242046&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=4016

Family Group

	4004	4008	4016	4026	4032	4052	4056	4085
Short Term Temperature Resistance (°C) Test Condition: Short Term (minutes, hour)	193	193	193	193	193	193	93	

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Family Group (continued)

	4004	4008	4016	4026	4032	4052	4056	4085
Liner Color Test Name: Primary	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Green Plaid	Tan
Long Term Temperature Resistance (°C) Test Condition: Long Term (day, weeks)	104	104	104	104	104	104	52	
Color	Natural	Natural	Natural	Natural	Natural	Black	Black	Natural
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

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