



Double Coated Urethane Foam Tapes

4000 Series

Technical Data

March, 2000

Product Description	4004	1/4 in. (6.4 mm) Double-Coated Urethane Foam Tape
	4008	1/8 in. (3.2 mm) Double-Coated Urethane Foam Tape
	4016	1/16 in. (1.6 mm) Double-Coated Urethane Foam Tape
	4026	1/16 in. (1.6 mm) Double-Coated Urethane Foam Tape
	4032	1/32 in. (0.8 mm) Double-Coated Urethane Foam Tape
	4052	1/32 in. (0.8 mm) Double-Coated Black Urethane Foam Tape
	4056	1/16 in. (1.6 mm) Double-Coated Black Urethane Foam Tape
	4085	0.045 in. (1.1 mm) Double-Coated Urethane Foam Tape

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Construction

Products	Tape 4004	Tape 4008	Tape 4016	Tape 4026	Tape 4032	Tape 4052	Tape 4056	Tape 4085
Adhesive Type:*	100 (A-20)	100 (A-20)	100 (A-20)	100 (A-20)	100 (A-20)	100 (A-20)	100 (A-20)	R-40
Adhesive Carrier:	Polyurethane Foam							
Thickness: Nominal in. (mm)	1/4 0.250 (6.4)	1/8 0.125 (3.2)	1/16 0.0625 (1.6)	1/16 0.0625 (1.6)	1/32 0.031 (0.8)	1/32 0.031 (0.8)	1/16 0.0625 (1.6)	3/64 0.045 (1.2)
Tolerance in. (mm)	0.215-0.285 (5.46-7.24)	0.110-0.150 (2.79-3.81)	0.045-0.080 (1.14-2.03)	0.045-0.080 (1.14-2.03)	0.025-0.040 (0.64-1.02)	0.025-0.040 (0.64-1.02)	0.045-0.080 (1.14-2.03)	0.039-0.054 (0.64-1.02)
Color:	Natural	Natural	Natural	Natural	Natural	Black	Black	Natural
Release Liner:	0.003 in. (0.08 mm) Green Plaid Paper							
Approximate Density: (Foam Only) lb./ft ³ (kg/m ³)	12 (190)	15 (240)	11 (175)	18 (290)	20 (320)	14 (225)	11 (175)	22 (352)

*100 (A-20) Adhesive 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.

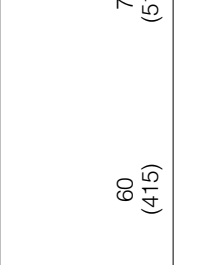
740 (R-40) Adhesive is a medium-firm rubber-resin pressure sensitive adhesive system. It features good holding power and adhesion to a wide variety of surfaces including many low surface energy plastics such as polyethylene and polypropylene.

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Typical Physical Properties and Performance Characteristics

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

Products	Tape 4004	Tape 4008	Tape 4016	Tape 4026	Tape 4032	Tape 4052	Tape 4056	Tape 4085	
Normal Tensile: ("T" Block) 1 in ² (6.45 cm ²) Jaw Speed 2 in/min (50 mm/min)	12 (85)	25 (170)	50 (345)	40 (275)	60 (415)	75 (515)	50 (345)	45 (310)	
Static Shear:									
 <p>Measured at various temperatures and gram loadings. (1/2 sq. in. overlap). Will hold listed weight for 100 hours.</p>	1000	1000	1500	2000	2000	1500	1500	1000	
	72°F (22°C)	500	500	1000	1000	1500	1000	1000	250
	120°F (49°C)	500	500	750	1000	1000	750	750	—
	150°F (66°C)	250	250	750	750	1000	750	750	—
200°F (93°C)									
Tensile Strength: psi (kPa)	90 (620)	160 (1100)	140 (965)	180 (1240)	240 (1655)	225 (1550)	140 (965)	140 (965)	
Elongation %:	90	90	100	100	90	110	100	100	
Temperature Resistance: Short Term (Minutes, Hours)	380°F (193°C)	380°F (193°C)	380°F (193°C)	380°F (193°C)	380°F (193°C)	380°F (193°C)	380°F (193°C)	200°F (93°C)	
Long Term (Days, Weeks)	220°F (104°C)	220°F (104°C)	220°F (104°C)	220°F (104°C)	220°F (104°C)	220°F (104°C)	220°F (104°C)	125°F (52°C)	
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 at -20°F (-30°C):	No cracking when flexed around a 1/4 in. (6.4 mm mandrel)								
Thermal Conductivity: BTU/hr/°F/ft ² /ft (watt/metre Kelvin)	0.036 (0.062)	0.036 (0.062)	0.036 (0.062)	0.036 (0.062)	0.036 (0.062)	0.036 (0.062)	0.036 (0.062)	0.036 (0.062)	
Dielectric Strength: Volts/mil (Volts/0.025 mm)	200-300 (200-300)	200-300 (200-300)	200-300 (200-300)	200-300 (200-300)	200-300 (200-300)	200-300 (200-300)	200-300 (200-300)	200-300 (200-300)	
Shelf Life:	24	24	24	24	24	24	24	18	
	months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity.								

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Available Sizes

Products	Tape 4004	Tape 4008	Tape 4016	Tape 4026	Tape 4032	Tape 4052	Tape 4056	Tape 4085
Roll Length: Standard yds. (m)	18 (16.5)	36 (32.9)	36 (32.9)	36 (32.9)	72 (65.8)	72 (65.8)	36 (32.9)	72 (65.8)
Maximum yds. (m)	25 (23)	50 (45.7)	100 (91)	100 (91)	175 (160)	175 (160)	100 (91)	100 (91)
Roll Width: Minimum in. in. (mm)	1/4 0.250 (6.4)	1/4 0.250 (6.4)	1/8 0.125 (3.2)	1/8 0.125 (3.2)	1/8 0.125 (3.2)	1/8 0.125 (3.2)	1/8 0.125 (3.2)	1/8 0.125 (3.2)
Maximum in. (mm)	46 (1148)	46 (1148)	2 (51)	46 (1148)	46 (1168)	46 (1168)	46 (1168)	46 (1168)
Slitting Tolerance:	in. $\pm 1/32$ in. ± 0.031 (mm) (± 0.8)							

Non-standard sizes may be subject to minimum order requirements.

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General Information

- The urethane foam is open cell. The urethane foam tapes are generally ideal for interior applications or for exterior applications where the tape will be protected from the environment.
- 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.
- Tape 4026 is available in roll form and die-cut pieces. Die-cut pieces of Tape 4026 is available in 3/4" or 1" squares, either individual pieces double lined with an extended liner on one side or in pads of 48 squares.
- Tape 4032 is also available in die-cut pieces as Tape 4022. Die-cut pieces of Tape 4022 is available in 3/4" or 1" squares, either individual pieces double lined with an extended liner on one side or pads of 48 squares.

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. **Note:** Be sure to 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.

Application Ideas

Tapes 4004, 4008, 4016, 4026, 4032, 4052, 4056

These urethane foams are soft, conformable and have high shear strength which makes them ideal for general purpose lightweight mounting and joining.

- Application ideas:
- 4404** – Bond mirrors to walls or furniture
 - 4008** – Bond acoustic panels to walls
 - 4016** – Mount interior signs and nameplates
 - 4026** – Mount air fresheners and soap dispensers
 - 4032** – Attach wire clips to various surfaces
 - 4052** – Bond window to microwave oven doors
Mount electrical channel to wall surfaces
 - 4056** – Mount wall corner protectors

Tape 4085

Tape 4085 combines conformability with high immediate adhesion to most plastics including ABS, polycarbonate, acrylic, polyethylene and polypropylene as well as metal and paint. Tape 4085 tears easily which makes it ideal for hand application.

- Application ideas: **Tape 4085** – Attach wire clips
Attach air fresheners

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For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550. Address correspondence to: 3M Bonding Systems Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-809-750-3000. In Mexico, phone: 5-728-2180.

Certification/Recognition

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ISO 9002

This Bonding Systems Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



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