3M

# Double Coated Vinyl Foam Tapes

## 4432 • 4416 • 4408

**Technical Data** **December, 2000**

(Supersedes September, 1998)

**Product Description**

**Tape 4432** 1/32 in. (0.8 mm) Double-Coated Vinyl Foam Tape

**Tape 4416** 1/16 in. (1.6 mm) Double-Coated Vinyl Foam Tape

**Tape 4408** 1/8 in. (3.2 mm) Double-Coated Vinyl Foam Tape

**Construction**

| Products | | Tape 4432 | Tape 4416 | Tape 4408 |
|---|---|---|---|---|
| Adhesive Type:* | | | 430 | |
| Adhesive Carrier: | | | Closed Cell Polyvinyl Chloride Foam | |
| Thickness: | Nominal | 1/32 in.<br>0.031 in.<br>(0.8 mm) | 1/16 in.<br>0.0625 in.<br>(1.6 mm) | 1/8 in.<br>0.125 in.<br>(3.2 mm) |
| | Tolerance | 0.025-0.040 in.<br>(0.64-102 mm) | 0.045-0.080 in.<br>(1.14-2.03 mm) | 0.110-0.150 in.<br>(2.29-3.81 mm) |
| Tape Color: | | Black or White | Black or White | Black Only |
| Release Liner: | | | 0.003 in.<br>(0.08 mm)<br>62# Densified Kraft<br>Green Plaid Paper | |
| Approximate Density:<br>Foam only<br>lb./ft.$^3$<br>(kg/m$^3$) | | <br><br>35<br>(560) | <br><br>20<br>(320) | <br><br>20<br>(320) |

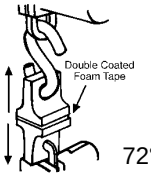
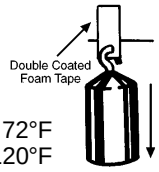
*Adhesive 430 is a firm acrylic pressure sensitive adhesive which features both high initial adhesion and good high temperature holding power.

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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 4432 | Tape 4416 | Tape 4408 |
|---|---|---|---|
| Normal Tensile: (T-Block) 1 in.$^2$ (6.45 cm$^2$) Jaw Speed 2"/min. (50 mm/min.)   72°F | 60 psi (414 kPa) Adhesive strength exceeds foam strength. | | |
| Static Shear: (As measured by static shear weight held for 100 hr.) 1/2 sq. in overlap   | | | |
| 72°F | 1000 g | 500 g | 500 g |
| 120°F | 250 g | 125 g | 125 g |
| Temperature Resistance: Short Term (Minutes, Hours) | 200°F (93°C) | 200°F (93°C) | 200°F (93°C) |
| Long Term (Days, Weeks) | 150°F (66°C) | 150°F (66°C) | 150°F (66°C) |
| Solvent Resistance: | No apparent degradation when exposed to splash testing of most hydrocarbon solvents. | | |
| UV Resistance: | No apparent degradation when exposed for seven days in U.V. chamber. | | |
| Cold Flex at -20°F (-30°C): | Slight cracking occurs when flexed around a 1/4 in. (6.4 mm) mandrel. | | |
| Thermal Conductivity: | 0.036 BTU Ft./Ft.$^2$ Hr. °F (0.062W/m•K) | | |
| Dielectric Strength: | 300 volts/mil (300 volts/0.0254 mm) | 150 volts/mil (150 volts/0.0254 mm) | 50 volts/mil (50 volts/0.0254 mm) |
| Shelf Life: | 18 months from date of manufacture when stored in original cartons at 70°F (21°C) and 50% relative humidity. | | |

## Available Sizes

| | | | |
|---|---|---|---|
| Roll Length (Subject to minimum order requirements): | | | |
| Standard | 72 yds. (65.8 m) | 36 yds. (32.9 m) | 36 yds. (32.9 m) |
| Maximum | 175 yds. (160 m) | 100 yds. (91.4 m) | 50 yds. (45.7 m) |
| Roll Width: (Subject to minimum order requirements: | | | |
| Minimum | 1/4 in., 0.250 in., (6.4 mm) | 1/4 in., 0.250 in., (6.4 mm) | 1/4 in., 0.250 in., (6.4 mm) |
| Maximum | 46 in. (1168 mm) | 46 in. (1168 mm) | 46 in. (1168 mm) |
| Slitting Tolerance: | | ± 1/32 in. ± 0.031 in. ± (0.8 mm) | |

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**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 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**

- These products are designed for general purpose mounting and joining, and may offer one piece removal in some applications. Surfaces and conditions for removal should be tested by the user to determine fitness for the user's particular purpose. The high degree of conformability of these tapes make them ideal for joining many rough irregular surfaces, and the closed-cell foam can make good water and air seals in certain applications.

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## 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, the 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.

## For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/bonding. 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.

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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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**Bonding Systems Division**

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