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3M™ General Purpose Double-Coated Tape 9817M

Product Description

3M™ General Purpose Double-Coated Tape 9817M provides a balance of peel and shear properties with good heat resistance. Immediate bond utilizing only normal nip pressure when laminated to most open cell urethane and closed cell urethane foams.

It bonds well to polyester, polyester urethane, polyethylene, polystyrene, vinyl foams and most rubbers. Exposed side is acrylic, liner side is rubber-based. Excellent quick stick and adhesion to high and low energy surfaces.



Product Features

- Extremely high-bond strength to most surfaces.
- Excellent versatility for lamination to foam material.
- Excellent dimensional stability with polyester carrier.
- Densified Kraft liner for rotary die-cutting.
- Good rotary die-cutting characteristics from the super calendared kraft liner.
- Use where high heat or UV resistance is not required.

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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 |
|------------------------------------|----------------|
| Total Tape Thickness without liner | 3.3 mil |
| Adhesive Carrier | Polyester Film |
| Liner | 74# Kraft |
| Relative Adhesion (HSE) | High |
| Relative Adhesion (LSE) | Medium |

Typical Performance Characteristics

| | Test Condition |
|--|-----------------------------|
| | Short Term (minutes, hours) |
| | Long Term (days, weeks) |

Property: Relative High Temperature Operating Ranges

| 180° Peel Adhesion | | Temp C | Temp F | Substrate | Backing |
|--------------------|----------|--------|--------|--------------------|----------------------|
| 2.3 N/cm | 21 oz/in | 22C | 72F | Polypropylene (PP) | |
| 6.6 N/cm | 60 oz/in | 22C | 72F | Stainless Steel | |
| 10.5 N/cm | 96 oz/in | 22C | 72F | Neoprene Rubber | 2 mil Polyester Film |
| 4.5 N/cm | 41 oz/in | 70C | 158F | Neoprene Rubber | 2 mil Polyester Film |

Property: 180° Peel Adhesion
 Method: ASTM D3330
 Dwell/Cure Time: 72
 Dwell Time Units: hr
 Environmental Condition: 52%RH
 notes: 12 in/min (300 mm/min)

| Property | Values | Method | Dwell/Cure Time | Test Condition | Notes |
|--------------------|-----------|------------|-----------------|--|-----------------|
| Static Shear | 10000 min | ASTM D3654 | 60 min | 1000 g @ Room Temperature | 1" x 1" Overlap |
| Static Shear | 4000 min | ASTM D3654 | 60 min | 250 g @ 70°C (158°F) high temperature shears | 1" x 1" Overlap |
| Solvent Resistance | Medium | | | | |

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Environmental Resistance

Properties defined are based on the adhesion of impervious faceplate materials to a stainless steel test surface.

Bond Build Up: The adhesive bond increases as a function of time and temperature.

Heat Resistance: 3M tape 9816L,M,H 150°F (65°C)

3M tape 9817L,M,H Acrylic-220°F (105°C) Rubber-175° (80°C)

Low Temp. Resistance: 40°F (4.4°C).

Processing

Die-cutting: Good die-cuttability. Lubricate dies with vanishing oil or similar low lubricants for improved processing.

Roll Laminating: Use rubber over steel roll set up with moderate application pressure. Make adhesive to substrate contact at nip area only.

Handling/Application Information

Application Ideas

- General purpose foam or rubber laminating (60 in).
- General purpose lamination of fabricated parts.

Application Techniques

For maximum bond strength, surface should be thoroughly cleaned and dried. A typical cleaning solvent is heptane or isopropyl alcohol. When using cleaning solvents, vanishing oils, or lubricants, consult the manufacturer's Material Safety

Data Sheet for proper handling and storage instructions.

Bond strength may be improved with firm application pressure and moderate heat causing adhesive to flow and develop intimate contact with bonding surface.

This adhesive is good for most indoor applications and can be used for outdoor applications if the adhesive is not directly exposed to the environment.

The temperature resistance is somewhat lower than our typical acrylics. Therefore, temperatures above 150°F (65°C) should be avoided.

Avoid contact with plasticized vinyl or plasticized rubber surfaces. Plasticizers will soften the rubber adhesive.

Storage and Shelf Life

Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.

If stored under proper conditions, product retains its performance and properties for 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-Tape-9817M?N=5002385+3291149013&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=9817M |

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Family Group

| | 9816L | 9816M | 9816H | 9817L | 9817M | 9817H |
|--|----------------|----------------|----------------|----------------|----------------|----------------|
| Relative High Temperature Operating Ranges (°C) Test Condition: Short Term (minutes, hours) | 65 | 65 | 65 | Acrylic: 105 | Acrylic: 105 | Acrylic: 105 |
| Relative High Temperature Operating Ranges (°C) Test Condition: Long Term (days, weeks) | 49 | 49 | 49 | Acrylic: 80 | Acrylic: 80 | Acrylic: 80 |
| Adhesive Carrier | Polyester Film | Polyester Film | Polyester Film | Polyester Film | Polyester Film | Polyester Film |
| Liner | 60# Kraft | 74# Kraft | 14 pt board | 60# Kraft | 74# Kraft | 14 pt board |

ISO Statement

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

Information

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