



Adhesive Transfer Tape 91022

Double Coated Tape 96042

Technical Data

January, 2011

Product Description 3M™ Adhesive Transfer Tape 91022 and 3M™ Double Coated Tape 96042 with 3M™ Silicone Adhesive provide high bond strength to most silicones and difficult-to-bond to substrates, including many low surface energy plastics and select varnished leathers.

| Construction | Product Number | Adhesive Type/ Thickness | Carrier | Adhesive Type/ Thickness | Liner Color, Type, Print | Liner Caliper | Total Tape Thickness (W/O liner) |
|--------------|----------------------------------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------|---------------------|-------------------------------------|
| | 3M™ Adhesive Transfer Tape 91022 | Silicone 0.002" (0.05 mm) | – | – | White, PET | 0.002" (0.05 mm) | 0.002" (0.05 mm) |
| | 3M™ Double Coated Tape 96042 | Silicone 0.002" (0.05 mm) | Clear PET 0.001" (0.025 mm) | Silicone 0.002" (0.05 mm) | White, PET | 0.002" (0.05 mm) | 0.005" (0.13 mm) |

Note: The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.110 g/cc.

Features

- Single liner tapes with a stable differential release.
- Good initial quick stick and adhesion build over time.
- Adhesion to silicone rubbers and silicone foams.
- Excellent solvent resistance.
- Superior temperature performance.

Application Ideas

- General purpose silicone bonding.
- Vibration damping.
- High temperature applications.
- Ideal for single liner applications.

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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.

| Product Number | 3M™ Adhesive Transfer Tape 91022 | 3M™ Double Coated Tape 96042 |
|---|-------------------------------------|-------------------------------------|
| Adhesion to surfaces ASTM D3330 - 90 degree 2 mil AL | Oz/in (N/25 mm) 24 hours (RT) | Oz/in (N/25 mm) 24 hours (RT) |
| Stainless Steel | 40 (11.0) | 40 (11.0) |
| ABS | 40 (11.0) | 40 (11.0) |
| Polycarbonate | 40 (11.0) | 40 (11.0) |
| Polypropylene | 35 (9.7) | 35 (9.7) |
| Silicone | 35 (9.7) | 35 (9.7) |
| Shear Strength - ASTM D3654 Modified – (1 inch ² sample size) | | |
| 1000 grams at 72°F (22°C) | >10,000 minutes | >10,000 minutes |
| 500 grams at 158°F (70°C) | >10,000 minutes | >10,000 minutes |
| Maximum Service Temperature | Up to 500°F (260°C) | 300°F (149°C)* |
| Relative Solvent Resistance | Excellent | Excellent |

*The PET carrier is the limiting factor.

Available Sizes

| | | |
|---|----------------------|----------------------|
| Roll length, width, slitting tolerance. | | |
| Maximum Length in: | | |
| 1/2" to 1" | 72 yds. (66 m) | 72 yds. (66 m) |
| >3" | 360 yds. (329 m) | 360 yds. (329 m) |
| Maximum Width: | 48" | 48" |
| Normal Slitting Tolerance: | ± 1/32 in. (0.08 mm) | ± 1/32 in. (0.08 mm) |
| Core Size (ID): | 3.0 in. (76.2 mm) | 3.0 in. (76.2 mm) |

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Application Techniques Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), will assist the adhesive in developing intimate contact with the bonding surface.

To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl 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.

*Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.

Environmental Performance

Humidity Resistance: High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 7 days at 90°F (32°C) and 90% relative humidity.

UV Resistance: When properly applied, nameplates and decorative trim parts are not adversely affected by exposure.

Water Resistance: Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.

Temperature Cycling Resistance: High bond strength is maintained after cycling four times through:

- 8 hours at 194°F (90°C)
- 16 hours at -40°F (-40°C)
- 8 hours at 100.4°F (38°C/100% RH)
- 16 hours at -40°F (-40°C)

Chemical Resistance: When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.

Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, *Lamination Techniques for Converters of Laminating Adhesives* (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

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| | |
|---|---|
| Storage | Store in original cartons at 70°F (21°C) and 50% relative humidity. |
| Shelf Life | If stored under proper conditions, product retains its performance and properties for one year from date of manufacture. |
| Technical Information | The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed. |
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This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2008 standards.



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