

3M

Double Coated Tissue Tape

91031

Technical Data Sheet

June 2014

DESCRIPTION

3M™ 91031 is a 6 mil thick double coated tissue tape with an acrylic adhesive on both sides. The tissue carrier provides dimensional stability and improved handling. The tape is well suited for bonding variety of plastics and foams.

PHYSICAL PROPERTIES: (Not for specification purpose, Calipers are nominal values)

Adhesive	:	Low Surface Energy Acrylic
Carrier	:	Tissue
Tape thickness	:	0.15 mm ± 0.010 mm
Liner	:	125 gsm PCK

FEATURES:

- 3M™ low surface energy acrylic adhesives used in the tape construction is a solvent based and ideal for applications requiring high adhesion to a wide variety of materials, including low surface energy plastics and foams.
- Tissue carrier, which adds dimensional stability to foams and other substrates and also provides easier handling during slitting and die cutting.
- 3M™ Double Coated Tape 91031 has a heavy 125 gsm Polycoated Kraft (PCK) liner for improved lay-flat properties and moisture stability.
- UL Listed (MH48050)

APPLICATION IDEAS:

- The soft construction of tissue tape makes this product ideal for many joining, mounting and gasketing applications involving irregular surfaces
 - This tape is specially formulated for foam lamination including low surface energy foams and for more demanding and moderate outdoor applications
 - Other application ideas are attaching trims, labels, fabric, web splicing and end tabbing etc.
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PERFORMANCE PROPERTIES (Not for specification purpose)

1. Peel Adhesion on different substrates

180 degree peel (Ref ASTM D3330; jaw speed 305 mm/min, 30 min dwell)

Surface	N/inch
Stainless Steel	22
Polycarbonate	18
Polyvinyl Chloride	22
Polypropylene	20
High Density Polyethylene	11

2. Temperature Resistance

Short term (minutes/hours) : 120 deg C

Long term (days/weeks) : 80 deg C

3. Shear Performance (Stainless Steel; ASTM D 3654; 1" x 1" over lap)

Surface		Minutes to Fail
Stainless Steel	Room Temperature, 1000 gm	>10 000
Stainless Steel	70°C, 500 gm	>10 000

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength. To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.

Note: Carefully read and follow the manufacturer's precautions and directions for use when working with 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.

All pressure sensitive adhesives require a certain amount of "dwell time" to achieve maximum adhesion. In most instances, ultimate adhesion will occur within 72 hours (at ambient temperature) after the bond has been made. For this reason, it is preferable to wait 72 hours before evaluating adhesive performance.

Shelf Life

24 months from date of manufacture when stored in original carton at 70F (22C) and 50%RH relative humidity

Product Use

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