



Double Coated Polyethylene Foam Tapes

1600T, 1600TG

Technical Data

revised on Feb. 14th, 2003

Product Description:

Product 1600T, 1600TG double-coated polyethylene foam tape combines a conformable closed cell foam with a high strength acrylic adhesive that provide good initial tack and offer high ultimate adhesion to a wide variety of surfaces, including many plastics. In addition, it also possesses good shear property that provides long term holding power, even under elevated temperature and environmental conditions.

Construction:

Product Number	Adhesive type¹/ Tape Thickness/ Tolerance	Adhesive carrier/ Color	Release liner Thickness, Color, Type, Print	Approximate density (foam only)
1600T	Acrylic, 0.043" (1.1 mm) ±15%	Closed cell PE ² foam, White	0.0027" (0.07 mm) White, Glassine paper, 3M PE FOAM logo print in light blue color	7 lb/ft ³ (112 Kg/m ³)
1600TG	Acrylic, 0.043" (1.1 mm) ±15%	Closed cell PE foam, Grey	0.0027" (0.07 mm) White, Glassine paper, 3M PE FOAM logo print in light blue color	7 lb/ft ³ (112 Kg/m ³)

Note 1: Pressure Sensitive Acrylic Adhesive provides excellent initial tack and adhesion to a wide variety surface including many low surface energy plastics.

Note 2: PE (Polyethylene)

Feature

1. 3M 1600T, 1600TG feature a medium-soft acrylic pressure sensitive adhesive system. The key characteristics of this adhesive include a combination of high initial adhesion and good shear and holding power to a wide variety of materials, including many plastics.
2. 3M 1600T, 1600TG feature good structural polyethylene foam strength to withstand heavy loading and harsh peeling.
3. Glassine paper liner features good converting characteristics.

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	1600T, 1600TG
Adhesion to stainless steel ASTM D3330 — 90 °angle peel, jaw speed 12 in/min, 72 hour dwell time, 5 mil Al foil backed, at 22°C, 50%RH	4 Kg/in (8.8 lb/in)
Normal tensile (T block) ASTM D897 —1 inch ² overlap, jaw speed 2 in/min, 72 hour dwell time	32 Kg/in ² (70 psi)
Dynamic shear ASTM D1002 —1 inch ² overlap, jaw speed 0.5 in/min,	30 Kg/in ² (65 psi)
Static shear ASTM D3654 —0.5 inch ² overlap will hold listed weight for 10,000 mins.	22°C 1000g 50°C 500g 70°C 200g
Relative High temperature Operating Ranges	
Long Term (days, weeks) Short Term (minutes, hours)	70°C (158°F) 82°C (180°F)

Shelf Life

12 months from date of receipt by customer when stored in original carton at 22 °C and 50% relative humidity
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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 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 n-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.

Application Ideas

- The foam construction makes these products ideal for many joining, mounting, gasketing, and sealing application involving irregular surface.
- 1600T, 1600TG tapes are specially formulated for many indoor/outdoor high performance purpose mounting and joining applications, including bonding to many Plastics, where moderate temperature and shear performance are required.
- For secure joining/mounting, 2 kilograms is the maximum static loading for 1 square inch tape application. Due to the consideration of less than 100% contact with the surface, variations in surface preparation, extreme/environmental conditions, customer evaluation and testing are required for every specific application.
- Application ideas for these tapes include
 - **Plastic Hooks, Racks and Dispensers**
 - **Sign, Nameplates and Plaques**
 - **Wire and Cable Clips**
 - **Appliance, Display Case and Electronic Equipment Trim**
 - **Automotive trim**
 - **Point of Purchase and other Displays**
 - **General purpose Joining/Mounting**

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3M 1600T, 1600TG was manufactured under a 3M's quality system registered to ISO 9002 standards; and environmental protection system registered to ISO 14000 standards.