



Premium Polyurethane Foam

Technical Data

March, 2013

Product Description

3M™ series polyurethane foam substrates with a high performance, pressure-sensitive acrylic adhesive on one side. 3M™ microcellular polyurethane foam is designed for high performance gasketing and sealing applications. Has excellent resistance to compression set and die cuts cleanly. 3M™ acrylic adhesive provides an excellent bond to various surfaces and has good shear strength at elevated temperatures. Available in 15 lb/ft³ and 20 lb/ft³ densities.

Product Construction



← Black Polyurethane Foam

← Acrylic Adhesive

Physical Properties and Performance Characteristics for Foam

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

<i>PHYSICAL</i>	English	Metric	English	Metric	Test Method
	15 lb./ft ³	(239 kg/m ³) Series	20 lb./ft ³	(320 kg/m ³) Series	
Compression Force Deflection @ 23°C, psi (Kpa)	305-6.5	24-45	8-12	55-83	ASTMD3574-D
Dimensional Stability, % max. change	5	0.3	5	0.3	
Tensile Strength, min. pli (kN/m)	50	345	75	517	ASTMD3574-E Die E
Tensile Elongation, % min.	90	90	100	100	ASTMD3574-E Die E
Tear Strength, min. pli (kN/m)	4.0	0.7	7.0	1.2	ASTMD624 Die C

<i>ENVIRONMENTAL</i>					
Water Absorption, %	4.0	4.0			ASTMD570
Ozone Resistance, visual	No Change				GM4486P-A80

Relative Temperature Operating Ranges:	
Minimum Continuous Temperature	-40°F (-40°C)
Maximum Continuous Application Temperature (minutes, hours)	225°F (107°C)

3M™ Premium Polyurethane Foam

Physical Properties and Performance Characteristics for Foam *(continued)*

Note: The user is responsible for determining whether the tape is best fit for a particular purpose and suitable for user's method of application.

Foam Products

3M™ Polyurethane Foam 15 lb./ft ³ (239 kg/m ³) Series		
3M™ Polyurethane Foam Tape 12026	1/16 in. (1.6 mm) thick	54" x 300ft
3M™ Polyurethane Foam Tape 12032	3/32 in. (2.4 mm) thick	54" x 225ft
3M™ Polyurethane Foam Tape 12028	1/8 in. (3.2 mm) thick	54" x 160ft
3M™ Polyurethane Foam Tape 12036	3/16 in. (4.8 mm) thick	54" x 100ft
3M™ Polyurethane Foam Tape 12034	1/4in. (6.4 mm) thick	54" x 80ft
3M™ Polyurethane Foam Tape 12038	3/8in. (9.5 mm) thick	54" x 60ft
3M™ Polyurethane Foam Tape 12030	1/2 in. (12.7 mm) thick	54" x 40ft

3M™ Polyurethane Foam 20 lb./ft ³ (320 kg/m ³) Series		
3M™ Polyurethane Foam Tape 12046	1/16 in. (1.6 mm) thick	54" x 300ft
3M™ Polyurethane Foam Tape 12062	3/32in. (2.4 mm) thick	54" x 225ft
3M™ Polyurethane Foam Tape 12048	1/8 in. (3.2 mm) thick	54" x 160ft
3M™ Polyurethane Foam Tape 12056	3/16 in. (4.8 mm) thick	54" x 100ft
3M™ Polyurethane Foam Tape 12054	1/4in. (6.4 mm) thick	54" x 80ft
3M™ Polyurethane Foam Tape 12049	3/8 in. (9.5 mm) thick	54" x 60ft
3M™ Polyurethane Foam Tape 12050	1/2 in. (12.7 mm) thick	54" x 40ft

Non Adhesive foams are UL 94HBF, File E61941 Recognized Components

Available Adhesives

Product	Adhesive Family	Adhesive Thickness (mils)	Carrier	Liner	Liner Thickness (mils)
6035PC	300MP	5.0	None	58# PCK	4.2
9772WL	300MP	2.0	None	96# PCK	7.0
9775WL	300MP	5.0	None	96# PCK	7.0
9832	300MP	4.8	PET	58# PCK	4.2
97053	Special	3.0	Scrim	50# DK	3.2

Note: See individual data sheet for adhesive physical properties and performance.

3M™ Premium Polyurethane Foam

Product Features and General Material Properties

3M™ polyurethane foam tapes series are black in color, semi-rigid polyurethane foam with pressure-sensitive adhesive on one side. The acrylic adhesive offers high initial quick stick to many types of surfaces along with excellent shear strength and high temperature performance. The adhesive is protected by a silicone treated paper liner and has a firm rigid open cell urethane that offers excellent cushioning characteristics while allowing air or gas vapors to pass through the open cells.

Application Techniques

Recessed lighting, door, window and cabinet seals. It also can be used to help cushion, damp sound and absorb vibration in electronics such as printers, keyboards, computers, aircraft lights and automotive interiors.

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. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*

***Note:** Carefully read and follow the 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.

Storage

Store in original cartons at 70°F (21°C) and 50% relative humidity.

Shelf Life

If stored under proper conditions, these products retain their performance and properties for two years from date of manufacture.

3M™ Premium Polyurethane Foam

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.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer

Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability

Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

ISO 9001

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



Industrial Adhesives and Tapes Division

3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550 • 877-369-2923 (Fax)
www.3M.com/industrial



Recycled Paper
40% pre-consumer
10% post-consumer

3M is a trademark of 3M Company.
Printed in U.S.A.
©3M 2013 (3/13)