

PORON® Foam Tape (0.25mm)

Data Sheet

Window Adhesive

PORON® Foam Tape is more than the sum of its parts. The high performance microcellular urethane construction with a specially engineered adhesive combine to produce a versatile window adhesive with superior bond strength, impact protection and reliability.

Why Choose PORON Foam Tape Window Adhesive?

<p>Superior Bonding</p> <ul style="list-style-type: none"> • Helps prevent catastrophic window delamination with a 20% stronger bond than the best competitive material • Impressive bond strength, even with low application force • Performs well in extreme environments 	<p>Excellent Impact Protection</p> <ul style="list-style-type: none"> • 15% greater impact protection than the competition • Protects displays from nearly 140cm (55") drops (Rogers Impact Protection test)
<p>Reliability</p> <ul style="list-style-type: none"> • Resists creep and compression set to secure window placement • Seals out dust & water 	<p>Processability</p> <ul style="list-style-type: none"> • Dimensional stability allows for easy repositioning • Adhesive removes cleanly during rework & repositioning

➔ Visit the Assembly Force Tool for custom calculations: www.rogerscorp.com/foamtape

➔ Watch PORON Foam Tape in Action! Visit: www.rogerscorp.com/foamtape

➔ Foam Tape Orientation: For optimal performance, orient liner-side to glass.

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PORON[®] Foam Tape (0.25mm)

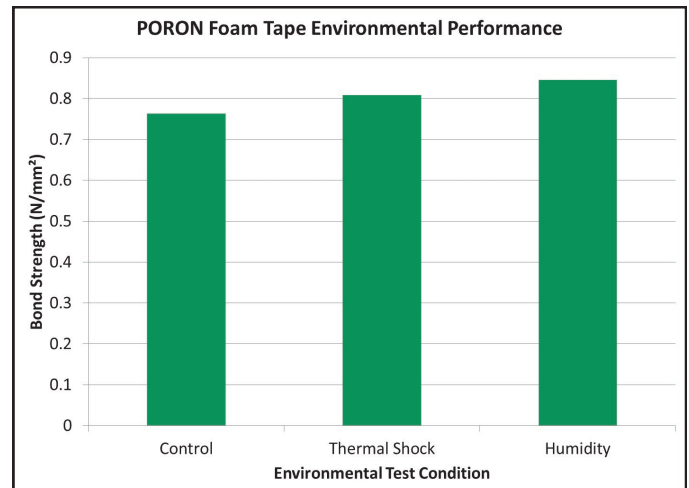
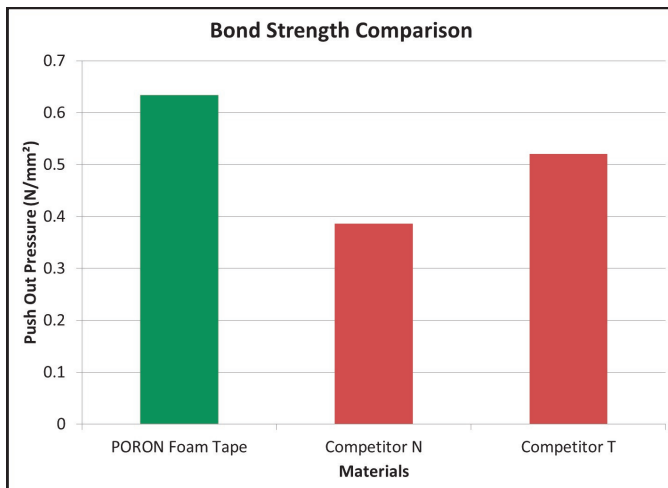
Window Adhesive

Bonding

The most crucial function of a window adhesive is to create a strong, reliable bond between a device's cover window and frame. Rogers' bond strength test best simulates failure in this application. Catastrophic test conditions are replicated using an Instron[®] test machine, the results of which can be found in the graph below.

As you can see, PORON Foam Tape outperforms competitive material by 20% or more!

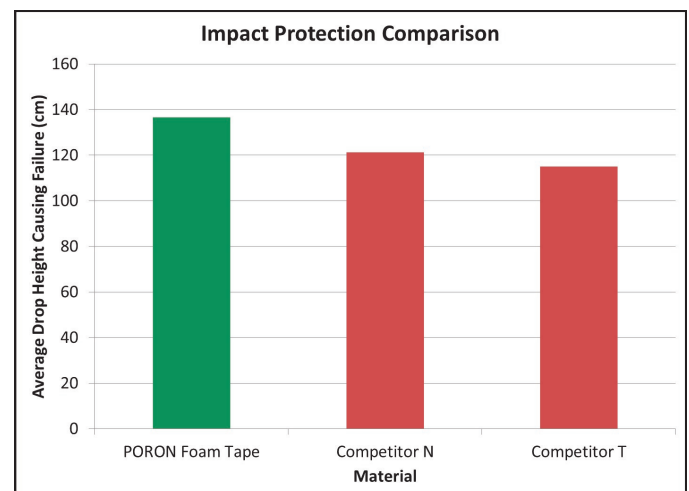
As shown in the graph below, this material maintains a strong bond when subjected to high humidity and thermal shock.



Impact Protection

The protection of window glass from drops is vital in minimizing warranty claims and rework costs.

Impact tests show PORON Foam Tape can protect window glass from drops nearly 140 cm (55") high, which is significantly better than the performance of competitive materials.



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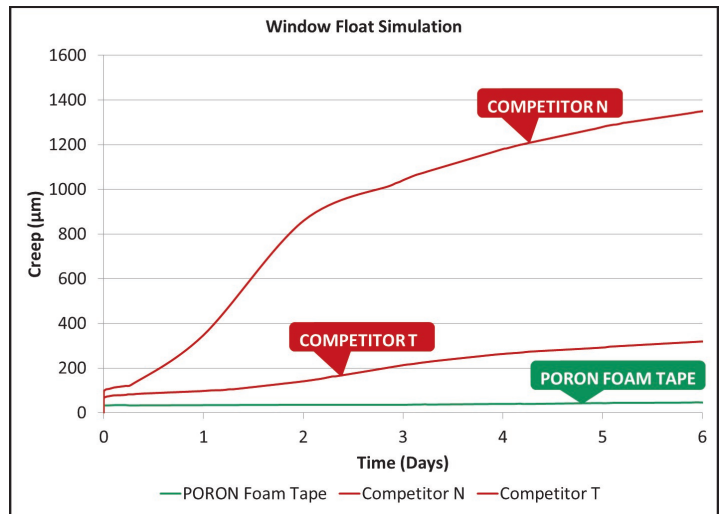
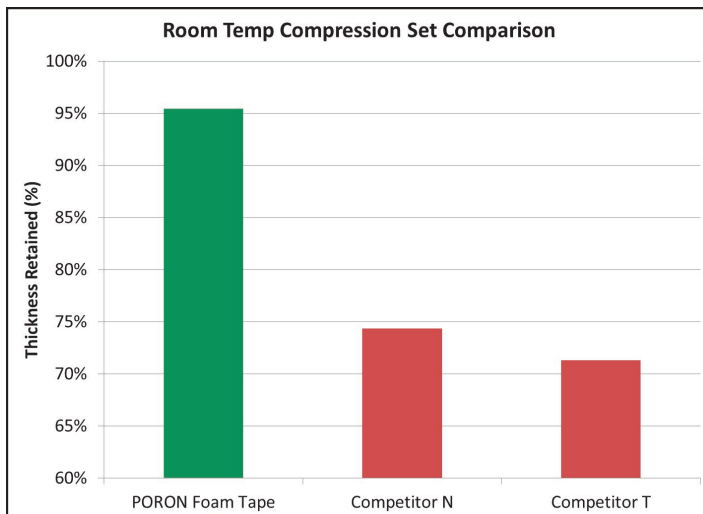
Reliability

PORON Foam Tape blocks out dust and water, passing a Rogers internal IPX7 test, while also performing very well in environmental exposure testing (for thermal shock and humidity testing results, see the graph on Page 2).

As with all PORON foams, Foam Tape does exceedingly well in maintaining its original thickness when under compression, ensuring integrity of design. See the graph to the right for a competitive comparison at 23°C.

A common failure, known as window floating, occurs when a foam tape stretches, or literally comes apart. This type of failure, also known as creep, can lead to costly warranty claims.

In Rogers' Window Float Simulation test, or creep test, competitive materials exhibited high failure rates, stretching to many times the size of their original thickness (see right). PORON Foam Tape proved superior, showing nearly zero creep.



Processability

PORON Foam Tape is dimensionally stable, allowing for easy handling during device rework. Additionally, the adhesive cleanly separates from the housing, saving time during both repositioning and rework.

Foam Tape Orientation: For optimal performance, orient liner-side to glass.

Watch PORON Foam Tape in Action! Visit:
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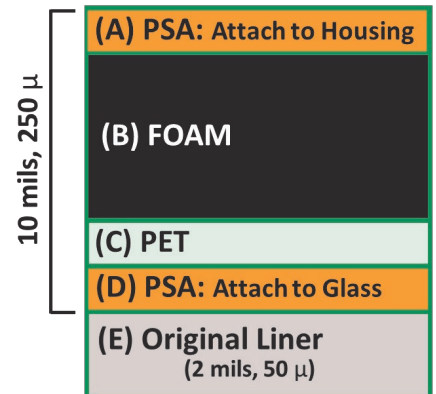
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Property	Test Method	Value
Thickness: mm (in)	PTP-0023	0.25 (0.010)
Tolerance: %		20
Compression Set:	ASTM D 3574 Test D @ 23°C	1.2
Typical: %	ASTM D 3574 Test D @ 70°C	5.1
Standard Color (Code)		Black (04)

Material	Description	Thickness		Tolerance	
		mm	in.	mm	in.
Construction*	Adhesive (A), Foam (B), PET (C), Adhesive (D)	0.250	0.010	± 0.051	± 0.002

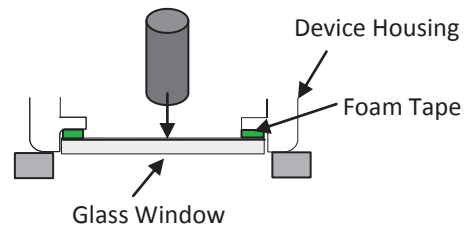
Foam Tape Construction



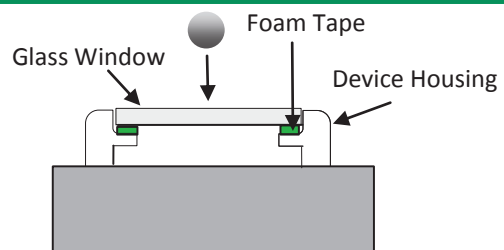
*This material is supplied on a 0.05mm PET liner (E). The liner is typically removed by the end user and is not included as part of the total thickness

Storage Information: PORON Foam Tape materials have a shelf life of 12 months from the date of manufacture when stored at room temperature. Storage in the original packaging located in a dry cool environment is recommended.

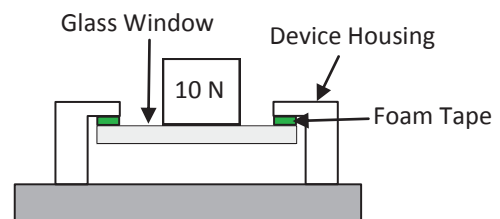
Bond Strength Test: An Instron machine pushes from the inside of the glass window until the bond between the window and the housing made by the tape is broken. The force at bond breakage is recorded.



Impact Protection: A steel ball is dropped on the outside of the glass window with the tape holding the glass in place. If the glass remains unbroken, the test is a success. The highest drop where a success occurs is recorded.



Window Float Simulation: A 10N weight is placed on top of a glass window attached to the housing as shown in the picture to the right. The displacement of the window over time (also known as “creep”) is tracked. After 6 days of testing, the test is terminated and the total elongation of the tape is measure.



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