

PORON® Urethane Foams

PORON® ThinStik™ 92-12 Self-Adhesive Solution

More Cushioning and Sealing, Less Wasted Space, Enables Thinner Designs

As handheld devices decrease in size and increase in functionality, achieving the proper balance of sealing and protection with the requirements of an ultra thin application can be an extreme design challenge. To help address this growing need, Rogers Corporation has specifically engineered PORON® ThinStik™ 92-12 self-adhesive solution.

One Product, One Solution

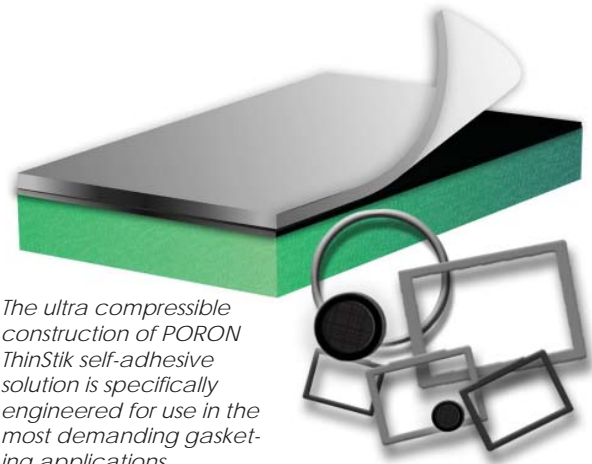
PORON ThinStik material is an all-in-one solution, combining Rogers' highly compressible 92-12 PORON impact absorbing foam with a pressure-sensitive adhesive layer built into its construction. This innovation enables higher compressibility than traditional laminated adhesive constructions to help designers ensure proper sealing and gap filling in ultra-thin device applications.

Long Term Protection and Sealing

Due to its high compression set resistance, PORON ThinStik 92-12 Series bounces back so gaskets hold their shape and seal for prolonged periods, effectively blocking contaminants and extending product life.

Engineered to Meet the Needs of Ultra-thin Designs

PORON ThinStik material contains fewer incompressible layers compared to traditional constructions. This allows designers the benefit of more foam in a highly compressible package for the same thickness of final gaskets.



The ultra compressible construction of PORON ThinStik self-adhesive solution is specifically engineered for use in the most demanding gasketing applications.

ThinStik Material Adds New Advantages to Existing PORON Material Benefits

- Durability and elasticity under pressure
- High levels of energy absorption
- Reliable performance over a wide range of temperatures
- Resistance to chemicals

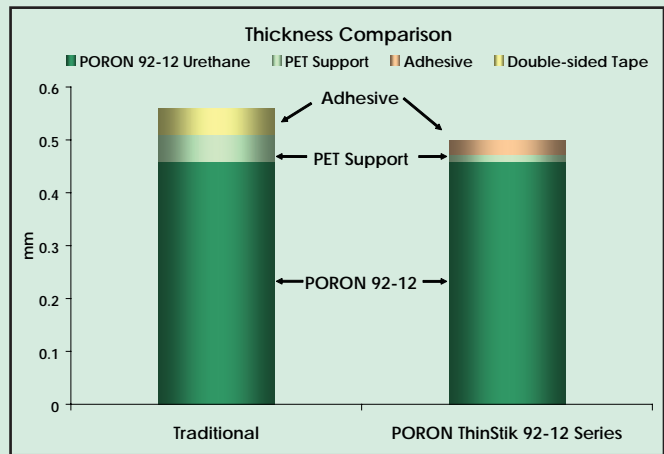
Ease of Design for the Most Demanding Handheld Applications

Design engineers for handheld devices are requiring thinner, softer, and more compressible materials to solve sealing and cushioning challenges. PORON ThinStik 92-12 self-adhesive foam meets those needs by offering the performance of PORON urethane with an adhesive layer built into the construction.

PORON ThinStik 92-12 Series is ideal for LCD gasketing and sealing needs in gaps as thin as 0.15 mm.

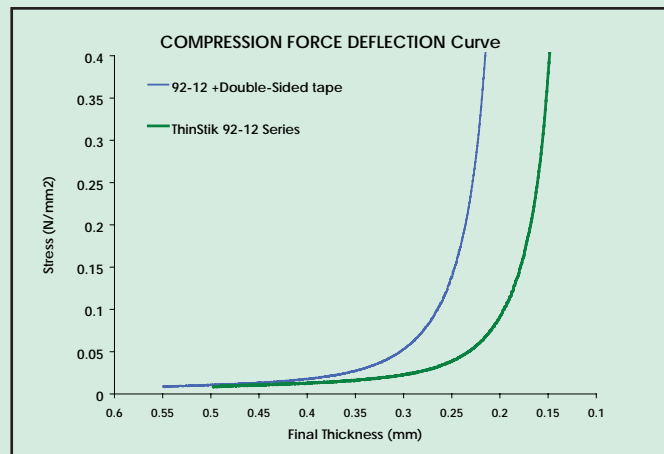
Thinnest Construction

PORON ThinStik material is manufactured through a unique process that combines the adhesive and foam in one step. This process eliminates the extra, incompressible layers of adhesive and PET found in traditional double-sided tape. The result? Designers achieve the same performance benefits in a thinner package.



Softer and More Compressible

Compression force deflection tests measure the amount of stress required to compress materials by varying percentages. CFD testing comparing PORON ThinStik 92-12 self adhesive material and a traditional foam with laminated adhesive shows that PORON ThinStik material is significantly more compressible than the traditional construction.



Resists Collapse

In contrast to alternative foam materials that collapse quickly under pressure, designers can rely on PORON Microcellular urethane foam to provide long term sealing performance. PORON materials retain over 90% of their original thickness under extreme conditions (material compressed 50% for 22 hours at 70°C). Due to its superior compression set resistance properties, PORON materials reliably seal out dust and moisture while providing added protection against shock and impact.

The information contained in this Data Sheet is intended to assist you in designing with Rogers' High Performance Foam Materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers' High Performance Foam Materials for each application.

Product Construction

Material	Description	Thickness		Tolerance	
		mm	mil	mm	mil
Urethane Foam	PORON 92-12 Series	0.46	18	± 0.08	± 3.0
Supported Adhesive	PET and Adhesive	0.038	1.5	+ 0.003/- 0.005	+ 0.1/- 0.2
Supported Adhesive + Liner	PET, Adhesive, Liner	0.088	3.45	± 0.005	± 0.2
Total Construction	Foam, PET, Adhesive	0.50	19.5	± 0.08	± 3.0

Typical Properties

	Property	Method	Detail	Unit	Value
Urethane	Color (code)				Black (04)
	Density <i>Tolerance</i>	ASTM D 3574-95	Test A	kg/m ³ (lb/ft ³)	192 (12) ± 32 (2)
	Compression Force Deflection	Strain rate = 0.2"/min	@25% Deflection	kPa (psi)	11.2 (1.63)
	Compression Set	ASTM D 1667-90 ASTM D 3574-95	Test D @ 73°F (23°C) Test D @ 158°F (70°C)	% max	5 10
Supported Adhesive	Peel Adhesion	ASTM D 1000 180° Peel	<i>20 min @ RT/72 @ hrs RT</i> to Stainless Steel to Polypropylene to Polycarbonate to ABS to Acrylic	N/25mm (oz/in)	8.0 (28.9) / 9.1 (32.7) 7.8 (28.0) / 8.0 (28.7) 8.5 (30.7) / 10.1 (36.2) 8.2 (29.4) / 9.7 (34.8) 8.2 (29.5) / 9.6 (34.6)
	Liner Release	ASTM D 1000 180° Peel	Room Temp 96 hr @ 66°C/80% RH	gram/in	9.4 10.6
	Tack	ASTM D 2979 (1 sec dwell)	Room Temp 96 hr @ 66°C/80% RH	grams	424 411
	Tensile	ASTM D 882	Room Temp MD / CMD 96 hr @ 66°C/80% RH	kg	5.4 (12.0) / 4.1 (9.1) 5.1 (11.4) 5.0 (11.0)
	Elongation	ASTM D 882	Room Temp MD / CMD 96 hr @ 66°C/80% RH	%	78 / 32 74 / 66
	Shelf Life		From date of manufacture	months	12

Adhesive Information

PORON ThinStik material utilizes an acrylic pressure sensitive adhesive manufactured to Rogers' specification. This adhesive provides reliable bonding to a wide variety of substrates, exhibits high quality optical clarity, withstands a wide range of temperatures and is resistant to chemical exposure.

The information contained in this Data Sheet is intended to assist you in designing with Rogers' High Performance Foam Materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers' High Performance Foam Materials for each application.

Product Description

Series	Adhesive		Density	Thickness		Color
92	TS1	-	12	20	-	04
Extra Soft-Slow Rebound	With Adhesive		pcf	Foam + Carrier (mil)		Black

Storage Information

PORON ThinStik 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.

Contact Information

Location	Office	Telephone	Fax
US	Rogers Corporation	860.928.3622	860.928.7843
Belgium	Rogers BVBA	+32.9.2353611	+32.9.2353658
Taiwan	Rogers Taiwan Inc.	+886.2.8660.9056	+886.2.8660.9057
Singapore	Rogers Technologies (Singapore) Inc.	+65.6747.3521	+65.6747.7425
Japan	Rogers Japan Inc.	+81.3.5200.2700	+81.3.5200.0571
Korea	Rogers Korea Inc.	+82.31.716.6112	+82.31.716.6208
Shanghai	Rogers (Shanghai) International Trading Co., Ltd.	+86.21.62175599	+86.21.62677913
Beijing	Rogers (Shanghai) International Trading Co., Ltd.	+86.10.59000828	+86.10.59000826
Shenzhen	Rogers (Shanghai) International Trading Co., Ltd.	+86.755.8236.6060	+86.755.8236.6123

The information contained in this Data Sheet is intended to assist you in designing with Rogers' High Performance Foam Materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that the results shown on the Data Sheet will be achieved by a user for a particular purpose. The user should determine the suitability of Rogers' High Performance Foam Materials for each application.

The world runs better with Rogers.®

The Rogers logo, The world runs better with Rogers., ThinStik and PORON are licensed trademarks of Rogers Corporation.
© 2008 Rogers Corporation. All rights reserved. Printed in USA.
8079-0808-1.0C, Publication 17-187