

PORON® Urethane Foams

Keypad Backing Pad

Application Note

THE CHALLENGE



Maintaining the spring forces of keypad backing pads over time

As smartphones become our mobile offices, the ability to edit documents and type quick email responses becomes crucial. In order to maintain the performance of a smartphone keyboard or touchscreen over a long period of time, a foam backing pad can be used.

Because consumers desire consistency from their touchscreen or keypad devices, it is all-important that these foam backers maintain their spring forces and resist stress relaxation over time.

ROGERS MATERIAL SOLUTIONS

The following PORON® materials can be used as keypad gaskets in smartphone devices:

PORON 92 Formulation Urethane Foam (4790-92)

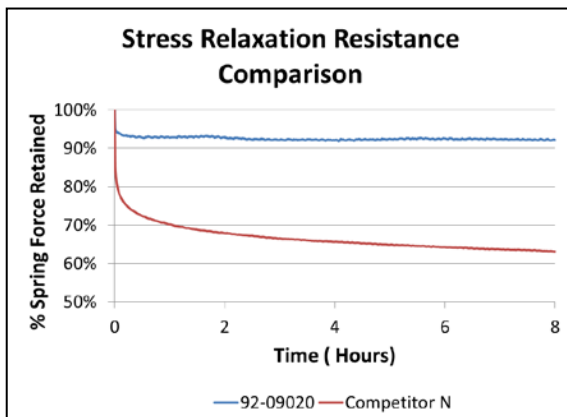
PORON 30 Formulation Urethane Foam (4701-30)

Two great materials designed for your spring force needs: 92 when an energy absorbing solution is needed, and 30 when a resilient material is in demand.

Both materials are highly resistant to stress relaxation. In the graph to the left, PORON material resists stress-relaxation, but the competition fails.

Excellent compression set resistance means long-term performance.

These materials protect very well against impact and particle ingress, so they maintain their performance in almost every situation.



The figure above shows how PORON Materials maintain their spring forces. After only 8 hours, the competitor has lost more than 35% of its original spring force. In contrast, PORON 92-09020 maintains about 92% of its original pushback force.

Conclusion
**PORON Foam breaks in;
the competition breaks down!**

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 Rogers logo, The world runs better with Rogers. and PORON are licensed trademarks of Rogers Corporation. © 2011 Rogers Corporation, All rights reserved. Printed in U.S.A., 1011-PDF, Publication # 17-233