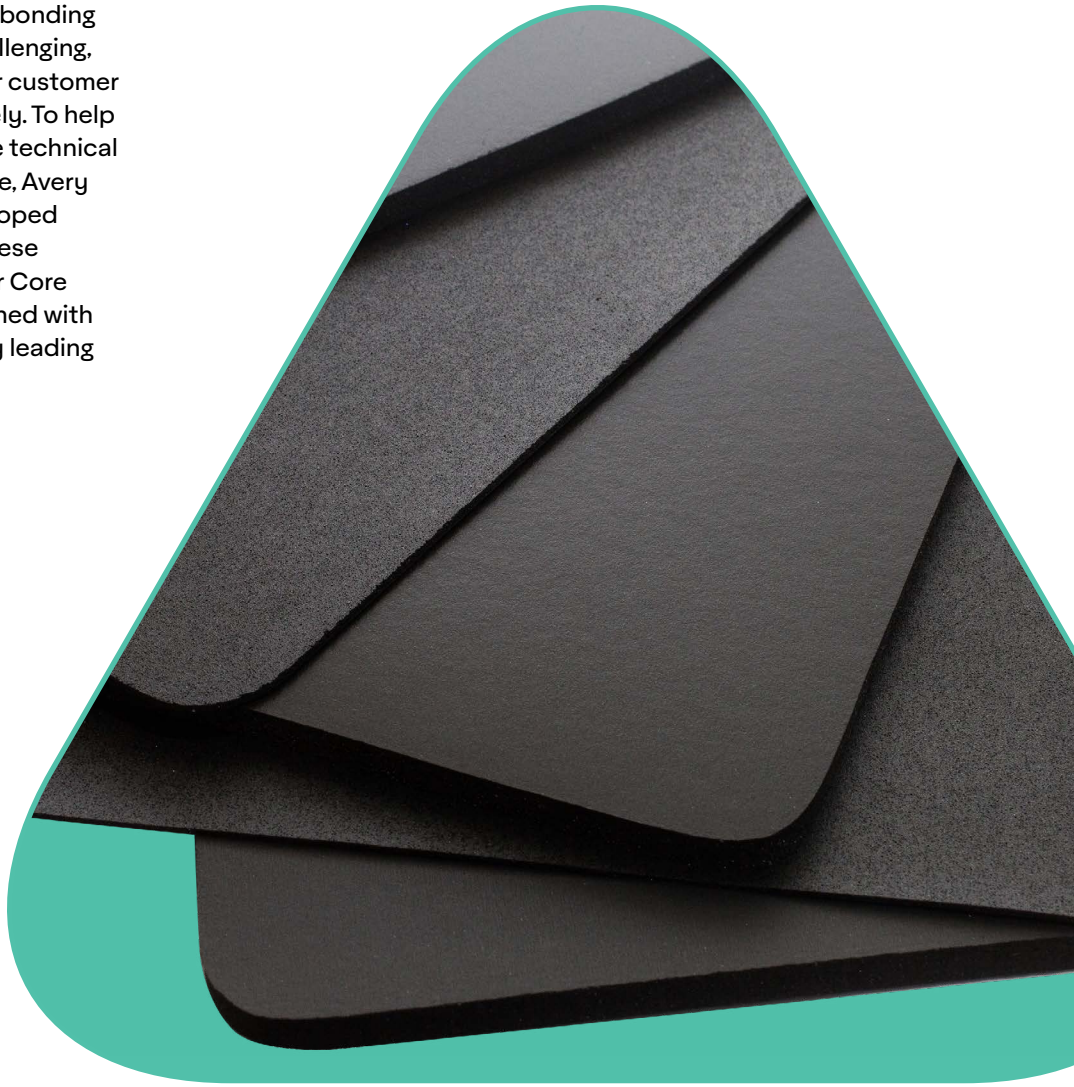
Avery Dennison Performance Tapes

Bonding Study: Rogers PORON® Industrial Polyurethanes

Determining the correct adhesive when bonding to foam and other materials may be challenging, especially when seeking to provide your customer an accurate quote quickly and accurately. To help you with the adhesive selection, and the technical requirements your customer may require, Avery Dennison Performance Tapes has developed a series of adhesive bonding studies. These studies highlight the performance of our Core Series™ Portfolio products when combined with foams and other materials from industry leading manufacturers.



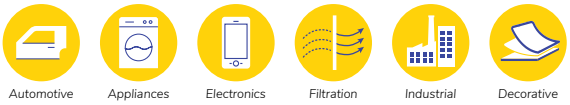
AVERY DENNISON

ROGERS CORPORATION

poron® ALWAYS THERE

Bonding to Rogers PORON® Industrial Polyurethanes

Rogers' line of PORON® industrial polyurethanes provides durable, long-term performance. Whether in gasket design, sealing, cushioning, or vibration management, PORON® products are low-outgassing, non-fogging, non-corrosive, and will not become brittle and crumble. The extensive range of PORON® materials address a multitude of design requirements.



Rogers PORON® and Avery Dennison Adhesive Sample Preparation

Avery Dennison adhesive products were backed with a 2 mil PET film and trimmed to a one-inch width. Two sample sets were laminated to Rogers PORON® Industrial Polyurethanes.

Set	Description
1	Laminated at room temperature. 30% compression, 20 psi, 20 fpm, 72 hr recovery after lamination.
2	Laminated at 220˚F, 30% compression, 20 psi, 20 fpm, 72 hr recovery at room temperature after lamination.

AVERY DENNISON

ROGERS CORPORATION

poron® ALWAYS THERE

Rogers PORON® and Avery Dennison Adhesive Sample Testing

Foam bonding is affected by the foam's base polymer, thickness, and cell type. Adhesion to foam is impacted by factors such as: adhesive mass, pressure, compression, lamination speed and temperature. All samples were tested at 180° Peel Adhesion at 12 in/min. It was determined by this study that heat lamination is beneficial (220˚F).

Rogers PORON Materials	Avery Dennison Adhesive Families	Avery Dennison Product Numbers	Performance with Rogers PORON Materials
• 4701-30-15 Very Soft • 4701-30-20 Very Soft • 4701-30-25 Very Soft • 4701-37-14 AquaPro™, Very Soft • 4701-40-15 Soft • 4701-40-20 Soft • 4701-40-30 Soft • 4701-41-15 AquaPro™, Soft • 4701-41-20 AquaPro™, Soft • 4701-41-30 AquaPro™, Soft • 4701-50-15 Firm • 4701-50-20 Firm • 4701-50-30 Firm • 4701-60-15 UR Very Firm • 4701-60-20 UR Very Firm • 4701-60-25 UR Very Firm • 4790-79-15 ShockSeal™ • 4790-92-12 Extra Soft • 4790-92-15 Extra Soft	High Performance Acrylic (HPA™)	HPA 1902 HPA 1905	Good Good
	LSE Modified Acrylic	FT 1943 PP	Better
	Low VOC Acrylic (Coming in March 2021)	FBA 1118 GL FBA 8218 GL FBA 7918 GL FBA 8318 GL	Better Better Better Better
	High Performance Low VOC Acrylic	FT 1149X	Better
	General Purpose Rubber	FBR 1950 FBR 8950	Better
	Differential: General Purpose Rubber / High Shear Rubber	FT 8327	Better
	General Purpose Acrylic	FT 1123 FT 1126	Better Better
	Pure Acrylic	FBA 1115 FBA 8315	Best Best

Good = Likely to achieve foam tear with heated lamination.
Better = May achieve foam tear without heat lamination.
Best = Likely to achieve foam tear at room temperature.

For more information about Rogers PORON® Industrial Polyurethanes visit, rogerscorp.com/elastomeric-material-solutions/poron-industrial-polyurethanes.

To identify the Avery Dennison Core Series adhesive ideal for your application, please refer to the Core Series Product Selection Tool. Using the Core Series' simple four-step adhesive selection process, you will be able to find the product that best suits your needs. The Core Series Product Selection Tool is available at tapes.averydennison.com/coreseries.

ADV#[XXX] 12/2020