Avery Dennison Performance Tapes

# Bonding Study: Woodbridge AutoBond™ Flexible Foams

Determining the correct adhesive when bonding to foam and felt 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 technology bonding studies. These studies highlight the performance of our Core Series™ Portfolio adhesive products when combined with foams and felts from national manufacturers.

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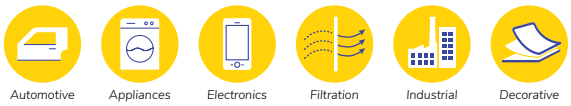
## Bonding to Woodbridge AutoBond Flexible Foams

The Woodbridge AutoBond™ family of trim foams can be used in a variety of processes and applications. The product line of foams is designed to meet the most rigorous OEM durability specifications while still providing superior value to the company's customers. Woodbridge AutoBond flexible foam products are manufactured using a continuous-pour method. Combined with Woodbridge's chemical expertise and comprehensive process controls, Woodbridge offers consistent and high-quality foam properties for use in the marketplace.

AutoBond flexible foams, designed to meet most OEM automotive interiors specifications and requirements, are available in flat and round blocks, and in polyether and polyester foam grades. AutoBond is used in the following auto applications: seating systems, interior systems, acoustics and overhead systems.




## Woodbridge AutoBond 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 Woodbridge AutoBond foams.

| 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. |

## Woodbridge AutoBond 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. The five foams were tested at 180° Peel Adhesion at 12 in/min. It was determined by this study that heat lamination is beneficial.

| Woodbridge AutoBond Materials | Avery Dennison Adhesive Families | Avery Dennison Product Numbers | Performance with Woodbridge AutoBond Materials |
|---|---|---|---|
| • AB14-180<br>• AB40-250<br>• AB40-170<br>• GC160-320<br>• AF40-200 | General Purpose Rubber | FBR 8950 | Good |
| | Differential: General Purpose Rubber / High Shear Rubber | FT 8327 | Good |
| | High Shear General Purpose Rubber | FT 8345 | Good |
| | High Performance Acrylic (HPA™) | HPA 1902<br>HPA 1905 | Better<br>Better |
| | General Purpose Acrylic | FT 1123<br>FT 1126 | Better<br>Best |
| | High Performance Low VOC Acrylic | FT 1149X | Best |
| | Pure Acrylic | FBA 1115<br>FBA 8315 | Best<br>Best |
| | Emulsion Acrylic | FBA 1118 GL<br>FBA 7918 GL<br>FBA 8318 GL | Best<br>Best<br>Best |

**Good** = Requires heat lamination for foam tear.
**Better** = May achieve foam tear without heat lamination.
**Best** = Foam tear at room temperature lamination.

For more information about Woodbridge AutoBond Materials visit, woodbridgegroup.com/Products/Flexible-Foam.

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.

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