

Avery Dennison Performance Tapes

# Bonding Study: Sunburst 1000 Felt Series

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.



## Bonding to Sunburst 1000 Felt Series

Manufactured by Superior Felt & Filtration, the Sunburst 1000 Felt Series is an earth-friendly, 100% synthetic, needle punched felt used in automotive trim and aftermarket products. It is suited for applications such as seating, headliners, gaskets, anti-squeak / anti-rattle (NVH) and other interior components. In addition to automotive, Sunburst 1000 Felt Series products may also be used for applications in appliances, aerospace, electronics, filtration, light and heavy industrial, and for creating decorative spaces.



## Sunburst Felt 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. Three sample sets were laminated to Sunburst 1000 Felt series materials.

Set	Description
1	Laminated at room temperature, 20 psi, 20 fpm.
2	Laminated at 220°F, 20 psi, 20 fpm, 72 hrs recover at room temperature.
3	Laminated at 220°F, 20 psi, 20 fpm, ASTM D3611, 2 hrs recover at room temperature.

## Sunburst Felt and Avery Dennison Adhesive Sample Testing

Felt bonding is affected by the felt's thickness and integrity. Adhesion to felt is impacted by factors, such as: adhesive mass, pressure, lamination speed and temperature. The three samples were tested at 180° Peel Adhesion at 12 in/min. It was determined by this study that heat lamination is beneficial.

Sunburst 1000 Series Felts	Avery Dennison Adhesive Families	Avery Dennison Product Numbers	Performance with Sunburst Felt
• .64 mm (S150360-020)	● High Performance Low VOC Acrylic	FT 1149X FT 8299	Good
• 1.07 mm (S150360)	● LSE Modified Acrylic	FT 1943 PP FT 3043	Good
• 1.57 mm (S150360-062)	● Differential: General Purpose Rubber / Removable	FT 8306	Better
• 1.98 mm (115078B-54)	● Differential: General Purpose Rubber / High Shear Rubber	FT 8327	Better
• 3.18 mm (123125B-72)	● General Purpose Acrylic	FT 1123 FT 1126 FBA 8960	Best

**Good** = Low cohesive split. Moderate force needed to remove adhesive from felt material.

**Better** = Cohesive split. Substantial force needed to remove adhesive from the felt material.

**Best** = Fibers tear and/or cohesive split from the felt material. Significant force needed to remove adhesive from felt material.

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](https://tapes.averydennison.com/coreseries).

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