

Avery Dennison Performance Tapes

# Acrylic Foam Bond (AFB™) Product Selection Guide

## Adhesion

Acrylic foam is viscoelastic in nature with flow and self adhesion properties which offers excellent bonding to a broad range of substrates.

## Durability

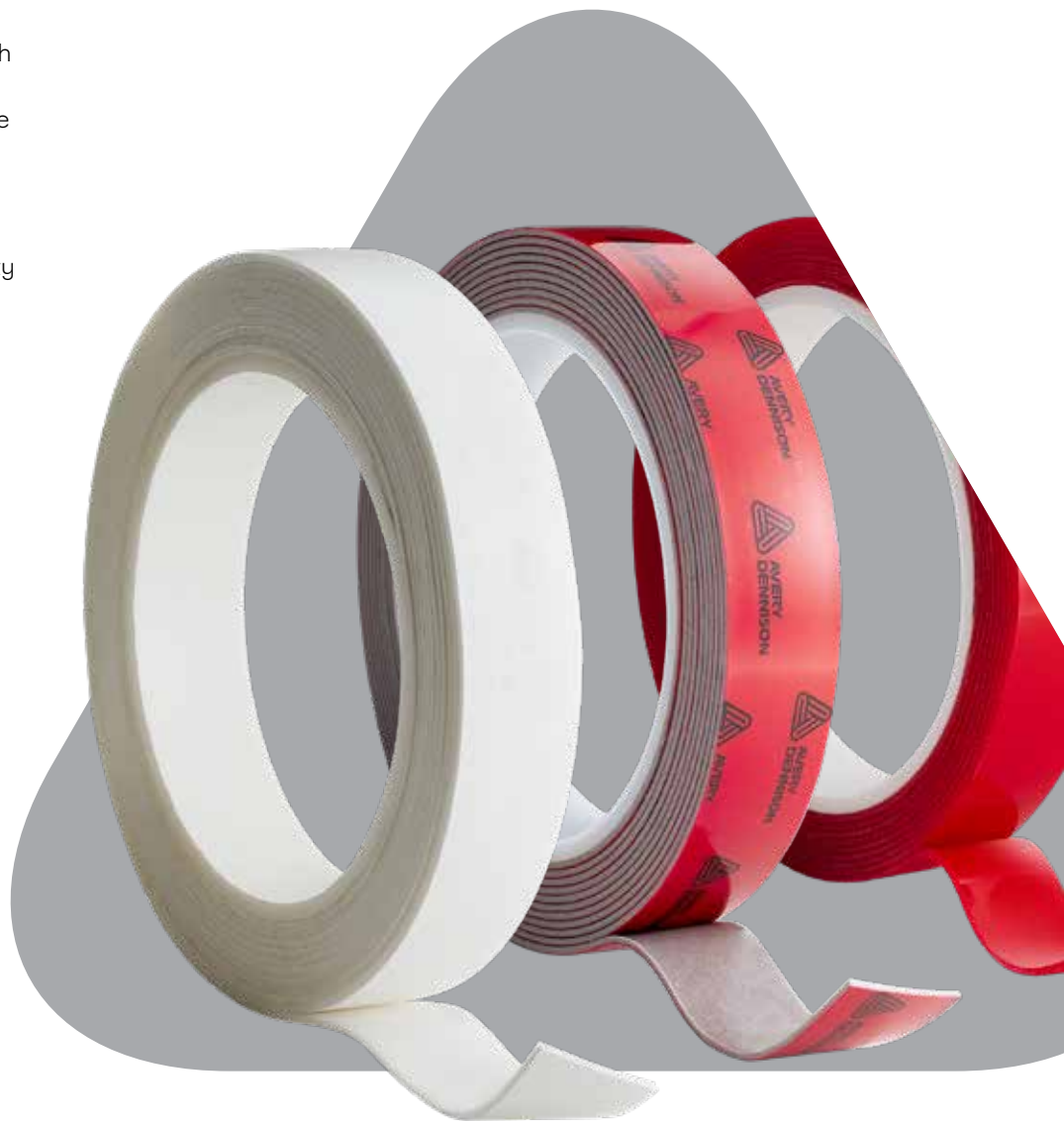
The unique composition of acrylic foam chemistry provides exceptional durability performance.

## Temperature Resistance

Service temperatures are higher than normal PE foam bonding operating parameters.

## Application Flexibility

Acrylic foam is suitable for wide range of component assembly, mounting and fixation applications in automotive, appliances, electronic devices, signage and graphics.



## Foam Bonding Solutions

AFB™ – Acrylic Foam Bond line of products is designed for a wide range of industrial applications requiring a high level of bonding strength. Our acrylic foam tapes are engineered to provide strong tack and adhesion to a multiple range of substrates such as PC, ABS, PMMA and metal.

### Features:

- Foam tape with viscoelastic acrylic foam carrier
- Closed cell structure
- Acrylic adhesive system
- Paper and film easy release liners

### Benefits

- High adhesion combined with good shear absorbs shock and distributes stress evenly
- Good moisture, UV and high temperature resistance
- Uniform bonding performance
- Can help eliminate the need for mechanical fasteners, drilling or grinding and related clean-up for certain applications
- Polyethylene liner option helps provide good moisture stability and easier converting with its high tear strength

### Temperature Ranges:

- Application minimum: 10°C (50°F)
- Service continuous: -40°C to 120°C (-40°F to 248°F)
- Service short term: 160°C (320°F)

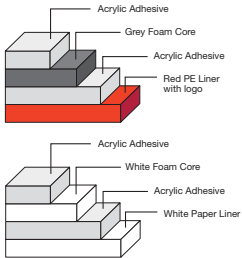
### Typical Applications:

- Glass and window mounting (water resistant)
- Loudspeaker and microphone bonding, television display and frame mounting
- Lens bonding for tablets and smart phones
- Door frame mounting for design decoration, refrigerator and other home appliances
- Nameplate, signboard and other component assembly and lamination
- Elevator stiffener mounting and lamination
- Assembly of cushions, pads or strips, fixation of mirrors and cabinet doors in furniture
- Automotive attachment and mounting

Acrylic foam offers enhanced internal strength properties versus PU and PE foams. Additionally, AFB provides good foam relaxation and stress vibration and can be used for gap filling.



**Coated Type**



**Multi Purpose Solution – AFB™ 61 Series**

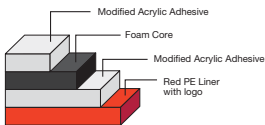
**Customer Benefits**

- Excellent resistance to migrating plasticizers in vinyl substrates
- Conformable foam density for better lamination
- Good adhesion on high energy and medium energy
- Good weather and environmental resistance

**Application Examples**

- Attachments in large domestic appliance, housing lamination, nameplate or sign bonding, washing machine controls and panel mounting
- Manufacturing and construction of appliance assembly, e.g. metal or plastic bonding with high internal strength
- Display (PDP / LCD / LED) frame holder / front mask / stand / front decoration

**Coated Type**



**High Performance Solution – AFB™ 220 Series**

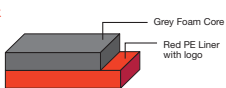
**Customer Benefits**

- Excellent bond to automotive clear coat paints
- Conformable foam density level enables good lamination with irregular and rigid substrates, even when there is a slight mismatch, while maintaining a high internal strength
- Better adhesion and tack over both MSE and LSE substrates including powder coated paint for a certain period of time
- Good weather and environmental resistance

**Application Examples**

- Attachments and construction like glass board mounting, stiffener mounting
- Bonding of bumper rails, nameplates on low surface energy material

**Self-Stick Type**



**Multi Purpose Solution – AFB™ 66 Series**

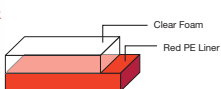
**Customer Benefits**

- High initial tack and adhesion for quick bonding
- Effective, economic bonding solution with high initial, ultimate bond strength for easy applying
- Aesthetically pleasing (smooth look), typically used on metal, glass and high surface energy plastic
- Good environmental resistance to UV, temperatures, chemicals and humidity
- Easy release performance after die cutting

**Application Examples**

- Attachments in large domestic appliance, housing lamination, stiffeners in air conditioners, nameplate or sign bonding
- Office furniture and electronics mounting, e.g. decoration and TV frame mounting
- Manufacturing and construction appliance assembly, e.g. metal or plastic bonding with high internal strength
- Other applications requiring quick initial tack, short dwell time

**Self-Stick Type**



**General Purpose Solution – AFB™ 66 C Series**

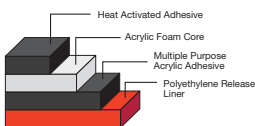
**Customer Benefits**

- Excellent adhesion combined with clarity level, suitable for applications where clear or colorless is required
- General purpose adhesive, best used on high surface energy substrates
- Good weather and environmental resistance
- Stain resistant after aged contact with clarity

**Application Examples**

- Clear solution for attaching handles to glass, seals between inner and outer dome of skylights, mounting of back lit signs, edge bonding resin filled glass
- Other applications requiring a clear foam solution

**Heat Activated**



**Heat-Activated Solution – AFB™ 94 Series**

**Customer Benefits**

- High adhesion combined with good shear absorbs shock and distributes stress evenly
- Good moisture, UV and high temperature resistance
- Uniform bonding performance
- Helps eliminate the need for mechanical fasteners, drilling or grinding and related clean-up for certain applications
- Polyethylene liner helps provide good moisture stability and easier converting with its high tear strength

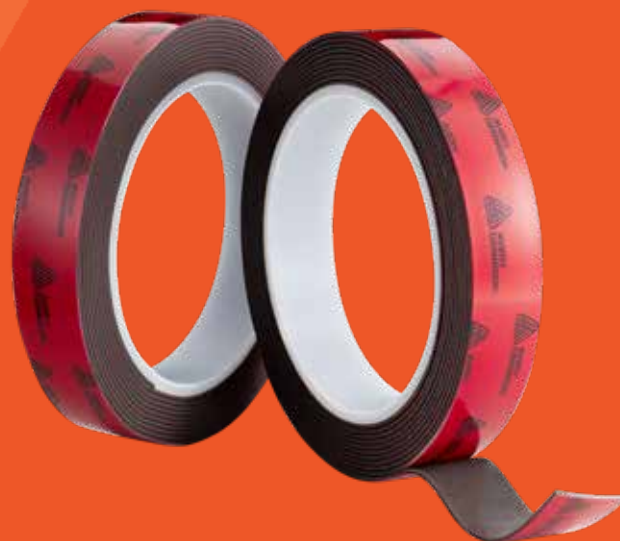
**Application Examples**

- Recreational Vehicles (RV, Marine, Off-Road)
- Large Domestic Appliance
- Rail and Bus

Acrylic Foam Bond Products			
Product		Multi-Purpose	
		AFB 61 Series	
Color		Black	White
Density Level		Conformable	Firm
Liner		Red PE - AD imprint	
Acrylic Foam Thickness			
0.40 mm	15.8 mils	AFB 6140B	AFB 6140W
0.64 mm	25.2 mils	AFB 6164B	AFB 6164W
0.80 mm	31.5 mils	AFB 6180B	AFB 6180W
1.10 mm	43.3 mils	AFB 6111B	
1.50 mm	59.1 mils	AFB 6115B	



Acrylic Foam Bond Products			
Product		Low Surface Energy / High Bond	
		AFB 220 Series	
Color		Black	
Density Level		Very Conformable	
Liner		Red PE - AD Imprint	
Acrylic Foam Thickness			
0.40 mm	15.8 mils	AFB 22040B	
0.64 mm	25.2 mils	AFB 22064B	
0.80 mm	31.5 mils	AFB 22080B	
1.10 mm	43.3 mils	AFB 22110B	
1.50 mm	59.1 mils	AFB 22150B	



Acrylic Foam Bond Products			
Product	General Purpose		
	AFB 66 Series		
Color	Grey		Clear
Density Level	Firm		Solid
Liner	Red PE - AD imprint		Red PE
<b>Acrylic Foam Thickness</b>			
0.40 mm	15.8 mils	AFB 6640G	
0.50 mm	19.7 mils		AFB 6650C
0.60 mm	23.6 mils	AFB 6660G	
0.80 mm	31.5 mils	AFB 6680G	
1.00 mm	39.4 mils		AFB 6610C
1.20 mm	47.2 mils	AFB 6612G	



Acrylic Foam Bond Products			
Product	Heat-Activated		
	AFB 94 Series		
Color	Black		
Density Level	Very Conformable		
Liner	Red PE		
<b>Acrylic Foam Thickness</b>			
0.40 mm	15.8 mils	AFB 9440B EZ+	
0.80 mm	31.5 mils	AFB 9480B EZ+	
1.20 mm	47.2 mils	AFB 9412B EZ+	



	Aluminum	Stainless Steel	Copper	Zinc	Tin	Lead	Glass	Kapton®	Phenolic	Nylon	Alkyd Enamel	Polyester	Epoxy Paint	Polyurethane	ABS	Polycarbonate	PVC	Noryl®	Acrylic	Polane® Paint	Powder paint	PVA	Polystyrene	Acetal	EVA	Polyethylene	Polypropylene	Tedlar®	Automotive Clear Coat	
Aluminum	<b>AFB™ 66</b> High Surface Energy																													
Stainless Steel																														
Copper																														
Zinc																														
Tin																														
Lead																														
Glass																														
Kapton®																														
Phenolic																														
Nylon																														
Alkyd Enamel																														
Polyester																														
Epoxy Paint																														
Polyurethane																														
ABS	<b>AFB™ 61</b> Medium Surface Energy High Surface Energy																													
Stainless Steel																														
Copper																														
Zinc																														
Tin																														
Lead																														
Glass																														
Kapton®																														
Phenolic																														
Nylon																														
Alkyd Enamel																														
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ABS																														
Polycarbonate																														
PVC																														
Noryl®																														
Acrylic																														
Polane® Paint																														
Powder paint																														
PVA																														
Polystyrene																														
Acetal																														
EVA	<b>AFB™ 220</b> Low Surface Energy Medium Surface Energy High Surface Energy																													
Stainless Steel																														
Copper																														
Zinc																														
Tin																														
Lead																														
Glass																														
Kapton®																														
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Polyurethane																														
ABS																														
Polycarbonate																														
PVC																														
Noryl®																														
Acrylic																														
Polane® Paint																														
Powder paint																														
PVA																														
Polystyrene																														
Acetal																														
EVA																														
Polyethylene																														
Polypropylene																														
Tedlar®																														
Automotive Clear Coat																														

**AFB™ 94**  
 Heat-activated product designed to bond rubber extrusions to low, medium and high surface energy substrates.

# Application Guidelines

## Clean

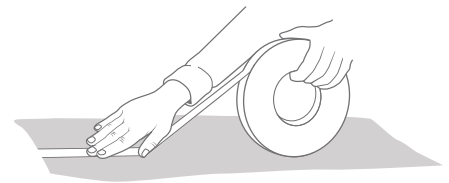
Clean the area to be bonded with a 50/50 mixture of isopropyl alcohol and water with a clean, non-abrasive cloth. Cleaning with a contaminated cloth can compromise adhesion.



## Temperature

The recommended temperature range for applying AFB tapes is: 16-43°C (60-110°F) and 38°C (100°F) in a humidity range between 30-80%.

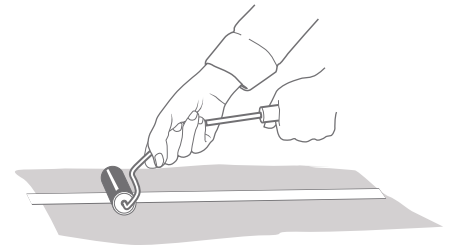
In colder months, winter season or if stored in a cold storage area, warm tape at 38°C (100°F) or 2-3 hours before applying.



## Pressure

Pressure is needed to provide intimate contact (or wet-out) between the tape and the bonding surface.

Recommendation is to use 7kg (15lbs) of roller pressure per 1.27cm (0.5in) of tape width. Visually, this is to compress the tape 1/3 to 1/2 its starting thickness during lamination.



## Time

Time	Bond Strength	Time	Bond Strength
<b>20 minutes</b>	50%	<b>24 hours</b>	90%
<b>60 minutes</b>	75%	<b>3 days</b>	100%

Microscopically, wet-out contact and bond strength are shown below.



## Amount of AFB Tape To Be Used

As a general rule, use four square inches of tape for every 1lb. of weight load.

## Storage/Shelf Life

18-22°C (64-72°F), 30-70% RH, out of direct sunlight, 1 year of shelf life.



## About Avery Dennison

Avery Dennison (NYSE: AVY) is a global materials science company specializing in the design and manufacture of a wide variety of labeling and functional materials. The company's products, which are used in nearly every major industry, include pressure-sensitive materials for labels and graphic applications; tapes and other bonding solutions for industrial, medical, and retail applications; tags, labels and embellishments for apparel; and radio frequency identification (RFID) solutions serving retail apparel and other markets. Headquartered in Glendale, California, the company employs more than 30,000 employees in over 50 countries. Reported sales in 2019 were \$7.1 billion. Learn more at [www.averydennison.com](http://www.averydennison.com).

## About Avery Dennison Performance Tapes

Avery Dennison Performance Tapes is a world-class operation focused on developing and manufacturing high performance pressure-sensitive adhesives and tapes for a broad range of applications in automotive, appliances, electronics, building and construction, specialty industrial and personal care segments. The organization has 50 years of experience supplying standard and customized pressure-sensitive materials designed to deliver innovative solutions for customers' needs across the globe. Worldwide manufacturing facilities ensure a global presence supported by local sales, technical and customer service throughout the regions. Learn more at [www.tapes.averydennison.com](http://www.tapes.averydennison.com).

Please refer to [Tapes.AveryDennison.com](http://Tapes.AveryDennison.com) for complete terms and conditions, including warranty terms, relating to this product. You should periodically review the site as terms and conditions are subject to change without notice.

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