

# 3M™ Bumpon™ Protective Products

## Resilient Rollstock - Clear Series

### SJ5600

#### Product Description

3M™ Bumpon™ Protective Product SJ5600 series are resilient 70 durometer clear polyurethane rollstock products utilizing an aggressive acrylic-based, pressure sensitive adhesive. These products have a high strength acrylic adhesive that provides excellent shear properties at elevated temperatures. The adhesive adheres well to glass, many metal surfaces, some paints, and many high surface energy plastics (e.g. Formica®, ABS, polycarbonate).

**Note:** This adhesive is not recommended for use on low surface energy plastics (e.g. polypropylene, polyethylene), or powdercoat painted and other various surfaces.

#### Product Construction

Products	3M™ Bumpon™ Protective Products	
	SJ5632	SJ5616
<b>Material:</b>	Clear polyurethane	
<b>Release Liner:</b>	4 mil, silicone coated, translucent polyester (PET), with printed 3M logo.	
<b>Adhesive:</b>	A-20 (acrylic)	
<b>Color:</b>	Transparent	
<b>Thickness:*</b>	1/32 in. 0.031 in. (0.8 mm)	1/16 in. 0.062 in. (1.6 mm)
<b>Thickness Tolerance: ± (inches) ± (mm)</b>	0.010 0.25	0.015 0.38
<b>Roll Length:</b>	72 yds.	36 yds.
<b>Roll Widths:</b>	4.5 in. (114.3 mm)	4.5 in. (114.3 mm)
<b>Slitting Tolerance: ± inches ± (mm)</b>	0.031 (0.8)	

\*Tested in accordance with ASTM-D-3767 method, procedure A (3.2 psi) measured without liner.

#### Custom Rollstock Products

3M can customize thickness to your specifications. Call your 3M sales representative for details. Custom products require a minimum order quantity.

The thickness capability range for 3M™ Bumpon™ Resilient Rollstock SJ5600 series is 1/32 in. (0.031) minimum and 1/16 in. (0.167) maximum.

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## Typical Physical Properties and Performance Characteristics

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Property	Test Method***	Test Results
<b>Hardness, Shore M:</b>	ASTM-D-2240	75
<b>Approximate Density, lb./ft.<sup>2</sup> (gm/cm<sup>3</sup>):</b>		70 (1.1)
<b>Resilience, %:</b>	ASTM-D-2632	6
<b>Kinetic Coefficient of Friction:*</b>	ASTM-D-1894 Glass, Stainless Steel Formica®	> 1 > 1
<p>*Two important laws of friction applicable to 3M™ Bumpon™ Protective Products Resilient Rollstock are (1) friction is independent of the area of contact between solids and (2) friction is proportional to the load between solids surfaces. Thus, if the load (weight) is doubled the force required to cause surface sliding is also doubled. This is expressed mathematically as follows:</p> <p style="text-align: center;">Slide force = (kinetic coefficient of friction) x (weight)</p>		
<b>Abrasion Resistance, gm/1000 cycles:</b>	ASTM-C-501; Tabor H, 1 kg	0.13
<b>Tensile, lb./in.<sup>2</sup> (kPa):</b>	ASTM-D-412, Die A	740 (5100)
<b>Elongation, %:</b>	ASTM-D-412, Die A	65
<b>Stain Resistance:**</b>	3M - 24 hrs. at 158°F against white paint, 7 days, 7 days exposed to UV	No staining
<b>Solvent Resistance:**</b>	3M - 24 hr. immersion 5% Detergent in water 25% Detergent in water 5% Bleach in water Gasoline Motor Oil Isopropyl Alcohol	No apparent effect No apparent effect No apparent effect Slight swelling No apparent effect Slight swelling
<b>Flammability Listing:</b>	Classification	UL94HB
<b>Load Tolerance:</b>	The “recommended” maximum load which 3M™ Bumpon™ Protective Product SJ5600 series rollstock will support is 100 psi (690 kPa) at 21°C (70°F) to 49°C (120°F).	
<b>Application Temperature:</b>	4°C (40°F) to 52°C (125°F)	
<b>Service Temperature:</b>	-34°C (-30°F) to 66°C (150°F); 107°C (225°F) intermittent exposure	

\*\* = Reference test for 24 hours only.

Results may vary for different product application conditions.

\*\*\* = When ASTM method is listed, data was collected in accordance with ASTM test method.

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## Typical Adhesive Performance Characteristics

**Note:** The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

### Static Shear Adhesive Performance

Temperature Tested at:	Time to Failure, minutes
24°C (75°F)	> 10,000
49°C (120°F)	> 10,000
70°C (158°F)	> 10,000
24°C (180°F)	> 10,000

One in. overlap shear test; tested in accordance with the ASTM-D-3654-M (1000 gram) method; testing completed on stainless steel test panels using 3M™ Bumpon™ Protective Product SJ5616.

### 90° Peel Adhesion Performance

Substrate	Peel Force, oz. per 1/2 in.
Polypropylene	3
Polystyrene	11
ABS	25
Stainless Steel	25
Aluminum	25
Glass	25

3M Test Method TM-2011; 72 hour dwell, 1/2 in. wide samples pulled at 12 in. per minute. Testing completed using Bumpon Protective Product SJ5616.

## Environmental Exposure

3M™ Bumpon™ Protective Products Resilient Rollstock Clear Series is intended for interior applications where resilience and all other physical properties will remain unchanged. When exposed to UV light for extended periods, some discoloration may occur. Bumpon clear rollstock may be used outdoors in a protected area with some discoloration possible. Simultaneous exposure to high humidity and temperature may degrade (soften) the product composition.

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### Features

- Transparent – universal color match
- Excellent resistance to yellowing
- Can be die cut to a variety of shapes and sizes
- Good resistance (resulting from a urethane composition which contains no plasticizers) to marring or staining
- Long aging resiliency – will not crack or harden
- Excellent cushioning properties
- Excellent abrasion resistance
- Vibration and shock damping
- Easy application – pressure sensitive adhesive backing

### Application Ideas

- Die cut shapes for glass table tops, cushioning glass from metal and wood frames
- Die cut shapes for use as cushions and spacers on cabinet doors, drawers, and lids
- Die cut shapes for use as skid-resistant feet on small appliances and desk top equipment, hand held or desktop electronic devices
- Die cut shapes for use as cushions and pads on glass or clear plastic shelves
- Strips or pads for use as skid-resistant surfaces on glass or clear plastic shelves
- Spacer or stop to prevent surface damage
- Corner protection strips
- Door kick pads
- Anti-rattle spacer to fill gaps, dampen noise and reduce vibration

### Application Techniques

To obtain maximum adhesion, surfaces must be unified, dry, and free of contaminants. Surface contact is fundamental to adhesive performance. To maximize contact on a substrate:

- Clean surfaces with low strength solvents such as isopropyl alcohol (rubbing alcohol) or heptane.  
**Note:** Be sure to follow the solvent's manufacturer's precautions and directions for use when using solvents.
- Apply firm pressure to increase the cold flow and contact of the adhesive with the substrate.
- Allow time (dwell) to increase the surface contact and adhesion.

**Note:** Product selection is ultimately the user's responsibility. Users should conduct their own tests under actual use and storage conditions to determine whether the product is fit for a particular purpose and method of application.

### Storage and Shelf Life

The shelf life of 3M™ Bumpon™ Protective Products SJ5600 Series is 18 months from the date of manufacture when stored in the original packaging materials and stored at 16-27°C (60-80°F) and 50% relative humidity.

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**Regulatory:** For regulatory information about this product, contact your 3M representative.

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### Electronics Materials Solutions Division

3M Center, Building 224-3N-11  
St. Paul, MN 55144-1000  
1-800-251-8634 phone  
651-778-4244 fax  
[www.3M.com/electronics](http://www.3M.com/electronics)

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