

PRODUCT DATA SHEET

Avery Dennison® 5100 Diffuser Film

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Introduction

Avery Dennison® 5100 Diffuser Films are premium quality cast vinyl films designed for use as a light diffuser. Avery Dennison® 5100 Diffuser Films applied onto flexible and rigid substrates balance the light distribution of a backlit sign and eliminate the issue of hot spots. Avery Dennison® 5130 Diffuser Film diffuses 30% of back lit light and blocks the remaining 70%. Avery Dennison® 5160 Diffuser Film diffuses 60% of back lit light and blocks the remaining 40%.

Conversion

Avery Dennison® 5100 Diffuser Films offer excellent conversion using computer signcutting, handcutting and die cutting.

Recommendations

- » Light diffusion of graphics for internally illuminated signs and canopies
- » Application onto flexible and rigid substrates with flat and simply curved surfaces

Note: Additional information can be found in technical bulletin 3.6: "Application instructions for Avery Dennison® 5100 Diffuser Films and Avery Dennison® 5300 Blockout Films on flat and rigid surfaces."

Features

- » Excellent white diffusion uniformity in transmitted light, when applied to clear rigid substrates
- » Additional diffusion obtained, when used on white substrates
- » Excellent colour fastness and durability
- » Evens out the colour(s) of the sign
- » Creates different shades of colour
- » Superior dimensional stability



Face Film

50 micron premium, cast vinyl film



Adhesive

permanent, clear, acrylic based



Backing

white bleached kraft paper, 125 g/m²



Durability

5 years (vertical exposure)



Shelf Life

2 years

Physical Characteristics

Features	Test method ¹	Results
Caliper, facefilm (micron)	ISO 534	50 micron
Caliper, facefilm + adhesive (micron)	ISO 534	75 micron
Elongation	DIN 53455	100% min
Dimensional stability	DIN 30646	0,4 mm max
Flammability		Self-extinguishing
Accelerated ageing	SAE J 1960, 1500h exposure	No significant color change
Shelf life (years)	Stored at 22° C/50-55 % RH	2 years
Durability ² (years)	Vertical exposure	5 years
Adhesion, initial (N/m)	FINAT FTM-1, glass	590 N/m
	PMMA	570 N/m
	Polycarbonate	480 N/m
	ULTRALON IV	420 N/m
Adhesion, after 24 hours (N/m)	FINAT FTM-1, Glass	650 N/m
	PMMA	625 N/m
	Polycarbonate	600 N/m
	ULTRALON IV	420 N/m
Temperature range		
Application temperature (Minimum: °C)		Minimum: +10° C
Service temperature (°C to +°C)		-40° to +80° C
Chemical resistance		
Chemical resistance	Mild acids	No effect
Solvent resistance	Mild alkalis and salts	No effect

Important

Information on physical and chemical characteristics and values in this document are based upon tests we believe to be reliable and do not constitute a warranty. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use.

All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of this document, the English version shall be prevailing and leading.

1) Test methods: More information about our test methods can be found on our website.

2) Durability: The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased.

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