

PRODUCT DATA SHEET



Avery® 5100 Diffuser Films

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Introduction

Avery 5100 Diffuser Films are premium quality cast vinyl films designed for use as a light diffuser. Avery 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 5130 Diffuser Film diffuses 30% of light and blocks out the remaining 70%.

Avery 5160 Diffuser Film diffuses 60% of back lit light and blocks 40%.

Description

Facefilm: 50 micron premium, cast vinyl film

Adhesive: permanent, clear, acrylic based

Backing paper: white bleached kraft paper, 125 g/m²

Conversion

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

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.

Recommendations for use

- 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 5100 Diffuser Films and Avery 5300 Blockout Films on flat and rigid surfaces."



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PRODUCT CHARACTERISTICS

Avery® 5100 Diffuser Films

Physical properties

Features	Test method ¹	Results
Caliper, facefilm	ISO 534	50 micron
Caliper, facefilm + adhesive	ISO 534	75 micron
Elongation	DIN 53455	100% min
Dimensional stability	DIN 30646	0,4 mm. max
Adhesion, initial	FINAT FTM-1, Glass PMMA Polycarbonate ULTRALON IV	590 N/m 570 N/m 480 N/m 420 N/m
Adhesion, ultimate	FINAT FTM-1, Glass PMMA Polycarbonate ULTRALON IV	650 N/m 625 N/m 600 N/m 420 N/m
Flammability		self-extinguish
Accelerated ageing	SAE J 1960, 1500h exposure	No significant change
Shelf life	Stored at 22° C/50-55 % RH	2 years
Durability ²	Vertical exposure	5 years

Temperature range

Features	Results
Application temperature	Minimum: +10° C
Service temperature	-40° to +80° C

Chemical resistance

Resistant to most petroleum based oils, greases and aliphatic solvents.
Resistant to mild acids, alkalis and salts.

Important

Information on physical and chemical characteristics is based upon tests we believe to be reliable. The values listed herein are typical values and are not for use in specifications. 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.

Warranty

Avery® branded materials are manufactured under careful quality control and are warranted to be free from defect in material and workmanship. Any material shown to our satisfaction to be defective at the time of sale will be replaced without charge. Our aggregate liability to the purchaser shall in no circumstances exceed the cost of the defective materials supplied. No salesman, representative or agent is authorised to give any guarantee, warranty, or make any representation contrary to the foregoing.

All Avery® branded materials are sold subject to the above conditions, being part of our standard conditions of sale, a copy of which is available on request.

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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