Avery Dennison® 5100 Diffuser Films

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
- Creates different shades of colour
- Excellent dimensional stability

Description

Film: 50 micron premium cast vinyl

Adhesive: Permanent acrylic

Backing: One side coated bleached Kraft paper, 125gsm

Outdoor life:
up to 5 years

Colours:
Avery Dennison 5130 - Diffuses 30% and Blocks 70% light
Avery Dennison 5160 - Diffuses 60% and blocks 40% light

Conversion

- ☑ **Flat bed cutters**
- ☑ **Friction fed cutters**
- ☑ **Die cutting**
- ☐ Thermal transfer
- ☐ Screen printing
- ☐ Cold overlaminating
- ☐ Estat printing
- ☐ Water based inkjet
- ☐ Solvent inkjet
- ☐ UV Cured inkjet

Common Applications

- Internally illuminated signs
- Architectural signage

Uses

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 light and blocks out the remaining 70%. Avery Dennison 5160 Diffuser Film diffuses 60% of back lit light and blocks 40%.

Physical characteristics

General

Calliper, face film	ISO 534	50 micron
Calliper, face film & adhesive	ISO 534	75 micron
Dimensional stability	DIN 30646	0.4 mm max.
Elongation	DIN 53455	100%
Adhesion, initial	FINAT FTM-1	
	Glass	590 N/m
	PMMA	570 N/m
	Polycarbonate	480 N/m
	ULTRALON IV	420 N/m
Adhesion, ultimate	FINAT FTM-1	
	Glass	650 N/m
	PMMA	625 N/m
	Polycarbonate	600 N/m
	ULTRALON IV	420 N/m
Flammability		Self extinguishing
Shelf life	Stored at 22° C/50-55 % RH	2 years
Accelerated aging	SAE J 1960 1500 hours exposure	No significant change
Durability **	Vertical exposure	5 years

Thermal

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

Important

Information on physical 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 any material for their specific use.

All technical data is subject to change without prior notice.

Warranty

Avery Dennison® 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 guarantee, warranty, or make any representation contrary to the foregoing.

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

****Durability**

Durability is based on exposure conditions in the normal middle European and central North American regions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing north in the southern hemisphere or south in the northern hemisphere; in areas of long high temperature exposure such as northern Australia; in industrially polluted areas or high altitudes, exterior performance will be decreased. Please refer to Avery Dennison Instructional Bulletin 1.3 for definitions and reductions based on the 'Zone System'.

***Information unavailable at time of printing

Test Methods

Dimensional stability:
Is measured on a 150 x 150 mm aluminium panel to which a specimen has been applied; 72 hours after application the panel is exposed for 48 hours to + 70°C, after which the shrinkage is measured.

Adhesion:
(FTM-1, FINAT) is measured by peeling a specimen at a 180° angle from a stainless steel or float glass panel, 24 hours after the specimen has been applied under standardised conditions. Initial adhesion is measured 20 minutes after application of the specimen.

Flammability:
A specimen applied to aluminium is subjected to the flame of a gas burner for 15 seconds. The film should stop burning within 15 seconds after removal from the flame.

Temperature range:
A specimen applied to stainless steel is exposed at high and low temperatures and brought back to room temperature. 1 hour after exposure the specimen is examined for any deterioration. Note: Prolonged exposure to high and low temperatures in the presence of chemicals such as solvents, acids, dyes, etc. may eventually cause deterioration.

Chemical Resistance:
All chemical tests are conducted with test panels to which a specimen has been applied. 72 hours after application the panels are immersed in the test fluid for the given test period. 1 hour after removing the panel from the fluid, the specimen is examined for any deterioration.

Corrosion Resistance:
A specimen applied to aluminium is exposed to saline mist (5% salt) at 35ºC. After exposure, the film is removed and the panel is examined for traces of corrosion.