PRODUCT DATA SHEET

Avery® Shade-Shifter Films

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Introduction
Avery Shade-Shifter Films are specialty cast vinyl films designed to provide a colour shift as the viewing angle is changed. Shade –Shifters can be used for decorative decals or graphics, accent striping and die-cut parts for automotive, marine and recreational vehicle markets.

Description
Facefilm: 50 micron iridescent speciality cast vinyl film
Adhesive: black pigmented, permanent, acrylic based
Backing paper: one side coated white kraft paper, 125 g/m^2

Conversion
Avery Shade-Shifter Films offer excellent weeding and cutting performance on a wide range of computer sign making equipment in all popular sizes. Avery Shade-Shifter Films can be thermal transfer printed, however screen printing and digital printing techniques are not recommended.

Features
- Outstanding durability and outdoor performance.
- Excellent conformability on flat and simply curved surfaces.
- Excellent layflatness and stability during cutting and weeding.
- High gloss for superior appearance.
- Excellent dimensional stability during use and application.

Recommendations for use
Avery Shade-Shifter Films can generally be used for lettering and decorations on flat to slightly curved surfaces.
- Vehicle graphics
- Vehicle stripings and other forms of decorations.
- Functional lettering and numbering.
- Retail signage.

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PRODUCT CHARACTERISTICS

Physical properties

Features	Test method[1]	Results
Caliper, facefilm	ISO 534	50 micron
Caliper, facefilm + adhesive	ISO 534	75 micron
Gloss	ISO 2813, 20º	50%
Dimensional stability	DIN 30646	0,5 mm. max
Adhesion, initial	FINAT FTM-1, stainless steel	525 N/m
Adhesion, ultimate	FINAT FTM-1, stainless steel	630 N/m
Flammability		self-extinguishing
Accelerated ageing	SAE J 1960, 1500h exposure	No negative impact on film performance
Shelf life	Stored at 22° C/50-55 % RH	1 year
Durability[2]	Vertical exposure	5 years

Temperature range

Features	Results
Application temperature	Minimum: +4° C
Temperature range	-30° to + 90°C

Chemical resistance

Features	Test method[1]	Results
Humidity resistance	200 hours exposure	No effect
Corrosion resistance	120 hours exposure to corrosion	No contribution
Water resistance	48 hours immersion	No effect

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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