

# PRODUCT DATA SHEET



## Avery® NV-200

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### Introduction

Avery Dennison® Night Vision NV-200 Utility Grade Urethane is an enclosed lens retroreflective film that has been primarily designed to produce flat computer cut signage and markings for promotional applications and unspecified signage. NV-200 is not recommended for printing applications.

### Description

Facefilm: High gloss, Retro-reflective Urethane Film  
Adhesive: Permanent, pressure sensitive, clear acrylic  
Release Liner: 90# High Release imprinted liner  
Standard Colours : White, Yellow, Red, Orange, Blue & Green

### Features

- Excellent cutting, weeding and transferring characteristics
- Basic colours

### Typical Reflectivity Values

#### Standard Colours

Colour	White	Yellow	Red	Orange	Blue	Green
Coeff of Retro-Reflection*	50	25	10	13	4	5
Reference	NV-200	NV-201	NV-202	NV-204	NV-205	NV-207

\* Cd/Lx/m<sup>2</sup> at an entrance angle of 5° and observation angle of 0.2°.

### Recommendations for use

- Promotional and unspecified signage.

### Conversion

Avery® NV-200 can be converted using a wide variety of conversion techniques including steel rule die-cutting, guillotine cutting, rotary cutting and thermal die-cutting. Always test suitability of NV-200 prior to use.

### Application

Application on flat surfaces. Not recommended for unpainted stainless steel. Wet method application is not recommended. The use of wet application invalidates the standard warranty.



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## Physical and Chemical Properties

### Physical properties

Features	Test method <sup>1</sup>	Results
Caliper, facefilm + adhesive		115 - 130 µm
Dimensional stability	500 hrs AtlasTwin Arc Wheatherometer, EH	0.75 mm max.
Shelf life	Stored at 23°C/50% RH	1 year
Outdoor Durability <sup>2</sup>	Vertical exposure	2 years

### Temperature range

Features	Results
Application temperature	Minimum: +10°C squeeze roll appl.
Service temperature	-40° to +80° C

### Chemical Properties

#### Solvent resistance

When properly processed and applied the film is resistant to most common solvents. When tested according to LS-300C, Section 3.6.2, after immersion in the following solvents for the specified length of time, the film shows no deterioration. Kerosene and Turpentine: 10 minutes, Toluene, Xylene and Methyl alcohol: 1 minute.

#### Colour consistency

Due to the nature of retroreflective material, graphics comprised of multiple pieces of film may give the perception of a colour shift depending on the viewing angle and light source. This is not considered a defect in the material. To minimise this effect, cut letters from one continuous piece of material or use materials from adjacent portions of the roll. Also, a small overlap (5 mm) or no overlap of the retroreflective film is recommended to maintain a consistent viewing angle.

#### Important

Information on product characteristics and physical and chemical properties 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.

