

DECLARATION OF PERFORMANCE

Construction Products Regulation 305/2011

No. 3100-1600

High Intensity Microprismatic Retroreflective Sheeting: W-3100 Series



Avery Dennison W-3100 Series Metalized Microprismatic Retroreflective Sheeting is designed for temporary work zone signs and traffic control devices and is a high-quality, 5-year durable base sheeting, 3-year printed, microprismatic retroreflective material with a pressure sensitive adhesive. This product is intended for use on delineators

Manufactured by: Avery Dennison, Reflective Solutions

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Oegstgeest, The Netherlands

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Mt. Prospect, IL 60056 USA

Avery Dennison performed factory product control and product sampling per assessment and verification of constancy of performance under System 1. Silniční vývoj - ZDZ spol. s r. o., Notified Body 1388, performed initial type testing, inspection of manufacturing facilities and factory products controls under system 1 and issued No.1388-CPR-18.2/2023 in accordance with EN12899-3:2007.

Essential Characteristics		Performance	Assessment Document
Daylight Chromaticity		CR1/2	EN 12899-1:2007 EN 12899-3:2007
Luminance Factor		CR1/2	
Coefficient of retro-reflection		R1 Class 3	
Impact Resistance		No Effect	
Corrosion Resistance		No Effect	
Durability		NPD	
Visibility after Weathering, Natural & Accelerated Artificial	Retroreflection	80% of Initial Requirement 100% of initial requirement EN12899-3	
	Chromaticity & Luminance Factor	Per Table 2 & 3 Below	

The performance of W-3100 Series is in conformance with declarations herein when evaluated per EN 12899-1:2007 and EN 12899-3:2007. This declaration of performance is issued for performance clarity under the sole discretion of Avery Dennison.

Signed for on behalf of Avery Dennison by: Erika Shang, Quality Manager

Date: 27 November 2023, Illinois, USA

Table 2: Daytime Chromaticity and Luminance Factors^A CR1

Colour		Colour Box Coordinates				Luminance Factor β
		1	2	3	4	
White	x	0,355	0,305	0,285	0,335	$\geq 0,27$
	y	0,355	0,305	0,325	0,375	
Yellow	x	0,522	0,470	0,427	0,465	$\geq 0,16$
	y	0,477	0,440	0,483	0,534	
Red	x	0,735	0,674	0,569	0,655	$\geq 0,03$
	y	0,265	0,236	0,341	0,345	

Notes: A – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EN 12899-1:2007, Section 4.1.1.3.

Table 3: Daytime Chromaticity and Luminance Factors CR2

Colour		Colour Box Coordinates				Luminance Factor β
		1	2	3	4	
White	x	0,305	0,335	0,325	0,295	$\geq 0,27$
	y	0,315	0,345	0,355	0,325	
Yellow	x	0,494	0,470	0,513	0,545	$\geq 0,16$
	y	0,505	0,480	0,437	0,454	
Red	x	0,735	0,700	0,610	0,660	$\geq 0,03$
	y	0,265	0,250	0,340	0,340	

Notes: A – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EN 12899-1:2007, Section 4.1.1.3.

Table 4: Night-time Chromaticity coordinates

Colour		Colour Box Coordinates			
		1	2	3	4
White	x	0,390	0,440	0,500	0,500
	y	0,410	0,440	0,440	0,390
Yellow	x	0,513	0,500	0,545	0,572
	y	0,487	0,470	0,425	0,425
Red	x	0,652	0,622	0,714	0,735
	y	0,348	0,348	0,256	0,265

Notes: A – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EN 12899-3:2007, Section 7.3.2.2.

Table 5: Coefficients of Retroreflection², R_A (cd/lux/m²)
(Includes RA2/R2 Requirements)

Entrance Angle (β_1 , $\beta_2=0^\circ$)	Observation Angle (α)	R_A								
		White	Yellow	Orange	Green	Red	Blue	Brown	Worboy Green	Grey
5°	0.2°	250	170	100	45	45	20	12	20	125
30°		150	100	60	25	25	11	8.5	15	75
40°		110	70	29	12	15	8	5	6	55
5°	0.33°	180	120	65	21	25	14	8	14	90
30°		100	70	40	12	14	8	5	11	50
40°		95	60	20	11	13	7	3	5	47
5°	2.0°	5	3	1.5	0.5	1	0.2	0.2	0.5	2.5
30°		2.5	1.5	1	0.3	0.4	-	-	0.3	1.2
40°		1.5	1	-	0.2	0.3	-	-	0.2	0.7

Notes: ² – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EAD 120001-01-0106, Section 2.2.3 at $\epsilon=0$ & 90° .

Table 6: Minimum initial coefficients of retroreflection R_A for type R1 Class 3 retroreflectors

Entrance Angle β_2 ($\beta_1=0^\circ$)	Observation Angle (α)	Coefficient of retroreflection R_A (cd × lx ⁻¹ × m ²) Type 1, Class 3
5°	20°	300
30°	2.0°	2.5

R1, class 3 as specified in Table 6 of this standard multiplied by the appropriate colour factor given in table 7

Table 7 - Colour factors for retroreflectors

Colour	Colour factors of retroreflectors
White	1.0
Yellow	0.6
Red	0.2

Table 7: Specific Signing Combination Performance Declarations

Signing Component	Product Name	Colors and Product Number	Declared Retroreflective Detail
Native Sheeting	W-3100 Series	W-3100 White W-3101 Yellow	Per Table 5/6
Solvent Screen Ink [#]	Z/PVC Series	Red onto W-3100	Per Table 5/6

Notes: [#] - Declared performance for components assumes application to white native sheeting unless otherwise noted.