

# DECLARATION OF PERFORMANCE

Construction Products Regulation 305/2011

No. 1500-1607

## Engineering Grade Retroreflective Sheeting:

- T-1500 Series
- T-1500 Series with OL-2000 Transparent EC Film
- T-1500 Series with 4930 Screen Ink
- T-1500 Series with UVTS Screen Ink
- T-1500 Series with 3801 Black Opaque Film
- T-1500 Series with TrafficJet Ecosolvent Ink & Clear Overlay
- T-1500 Series with TrafficJet UV Ink & Clear Overlay



T-1500 EG Series, in conjunction with the components listed, is a high-quality, 7-year durable, beaded retroreflective material with a pressure sensitive adhesive. This product is intended for use on permanent or temporary highway safety devices that require Class 1 retroreflective performance.



Manufactured by: Avery Dennison, Reflective Solutions

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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-3.2/2021.

Essential Characteristics		Performance	Assessment Document
Daylight Chromaticity		CR1/2	EN 12899-1:2007
Luminance Factor		CR1/2	
Coefficient of retro-reflection		RA1	
Impact Resistance		No Effect	
Visibility after Weathering, Natural & Accelerated Artificial	Retroreflection	80% of Initial Requirement	
	Chromaticity & Luminance Factor	Per Table 2 Below	

The performance of T-1500 EG Series is in conformance with declarations herein when evaluated per EN 12899-1:2007. 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: 08 August 2022, Illinois, USA

Classification: Avery Dennison - Internal

Table 2: Daytime Chromaticity and Luminance Factors<sup>A</sup> CR1

Colour		Colour Box Coordinates				Luminance Factor $\beta$
		1	2	3	4	
White	x	0,355	0,305	0,285	0,335	$\geq 0,35$
	y	0,355	0,305	0,325	0,375	
Yellow	x	0,522	0,470	0,427	0,465	$\geq 0,27$
	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	
Orange	x	0,610	0,535	0,506	0,570	$\geq 0,17$
	y	0,390	0,375	0,404	0,429	
Green	x	0,007	0,248	0,177	0,026	$\geq 0,03$
	y	0,703	0,409	0,362	0,399	
Dark Green	x	0,313	0,313	0,248	0,127	$0,01 \leq \beta \leq 0,07$
	y	0,682	0,453	0,409	0,557	
Brown	x	0,455	0,523	0,479	0,558	$0,03 \leq \beta \leq 0,09$
	y	0,397	0,429	0,373	0,394	
Blue	x	0,078	0,150	0,210	0,137	$\geq 0,01$
	y	0,171	0,220	0,160	0,038	
Black	x	0,385	0,300	0,260	0,345	$\leq 0,03$
	y	0,355	0,270	0,310	0,395	

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<sup>A</sup> CR2

Colour		Colour Box Coordinates				Luminance Factor $\beta$
		1	2	3	4	
White	x	0,305	0,335	0,325	0,295	$\geq 0,35$
	y	0,315	0,345	0,355	0,325	
Yellow	x	0,494	0,470	0,513	0,545	$\geq 0,27$
	y	0,505	0,480	0,437	0,454	
Red	x	0,735	0,700	0,610	0,660	$\geq 0,05$
	y	0,265	0,250	0,340	0,340	
Orange	x	0,631	0,560	0,506	0,570	$\geq 0,17$
	y	0,369	0,360	0,404	0,429	
Green	x	0,110	0,150	0,150	0,110	$\geq 0,04$
	y	0,415	0,415	0,455	0,455	
Dark Green	x	0,190	0,190	0,230	0,230	$0,01 \leq \beta \leq 0,07$
	y	0,580	0,520	0,580	0,520	
Brown	x	0,455	0,523	0,479	0,558	$0,03 \leq \beta \leq 0,09$
	y	0,397	0,429	0,373	0,394	
Blue	x	0,130	0,160	0,160	0,130	$\geq 0,01$
	y	0,086	0,086	0,120	0,120	
Black	x	0,385	0,300	0,260	0,345	$\leq 0,03$
	y	0,355	0,270	0,310	0,395	

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: Coefficients of Retroreflection<sup>1</sup>, Class RA1

Entrance Angle ( $\beta_1$ , $\beta_2=0^\circ$ )	Observation Angle ( $\alpha$ )	$R_A$						
		White	Yellow	Orange	Green	Red	Blue	Brown
5°	0.2°	70	50	25	9	14.5	4	1
30°		30	22	10	3.5	6	1.7	0.3
40°		10	7	2.2	1.5	2	0.5	-
5°	0.33°	50	35	20	7	10	2	0.6
30°		24	16	8	3	4	1	0.2
40°		9	6	2.2	1.2	1.8	-	-
5°	2.0°	5	3	1.2	0.5	1	-	-
30°		2.5	1.5	0.5	0.3	0.5	-	-
40°		1.5	1	-	0.2	0.5	-	-

Notes: 1 – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EN 12899-1:2007, Section 4.1.1.4.

Table 5: Specific Signing Combination Performance Declarations

Signing Component	Product Name	Colors and Product Number	Declared Retroreflective Detail
Native Sheeting	T-1500 Series	T-1500A* & T-1500D White* & T-1500B White T-1501A* & T-1501D Yellow* T-1505A* Blue^ T-1507A* Green T-1508A* Red T-1509A* Brown	Per Table 2/3 100% Table 4
Electronic Cuttable Overlay#	OL-1000 OL-2000 EC Film & 3801 Black	T-1500B + OL1000 OL-2000 & OL1000 Clear applied to T-1500D OL1000 Clear applied to T-1501D 3801 Black	Per Table 2/3 70% of Table 4
Solvent Screen Ink#	4930 Series	Yellow onto T-1500A* & T-1500B Blue onto T-1500A*^ & T-1500B^ Green onto T-1500A* & T-1500B Red onto T-1500A*^ & T-1500B Red onto T-1501A Yellow*.* Brown onto T-1500B+Clear Coat Black onto T-1500A & T-1500B	Per Table 2/3 70% of Table 4
Screen Printing#	UVTS Ink	Yellow onto T-1500 <sup>a</sup> Blue onto T-1500 <sup>a</sup> Red onto T-1500 <sup>a</sup> ^ Black onto T-1500	Per Table 2/3 70% of Table 4
Digital Printing Ecosolvent#	TrafficJet with OL-1000 or OL-2000 Clear	Yellow onto T-1500B^ & T-1500D <sup>a</sup> Blue onto T-1500B & T-1500D <sup>a</sup> Green onto T-1500B^ & T-1500D <sup>a</sup> Worboy Green onto T-1500D OL1000 Grey onto T-1500D + OL1000 Red onto T-1500B & T-1500D <sup>a</sup> Red onto T-1501D Yellow* Brown onto T-1500B & T-1500D <sup>a</sup> Black onto T-1500B & T-1500D Black onto T-1501D	Per Table 2/3 70% of Table 4
Digital Printing UV#	TrafficJet with OL-1000 or OL-2000 Clear	Yellow onto T-1500B^ Yellow onto T-1500D <sup>a</sup> OL-1000 only Blue onto T-1500B & T-1500D <sup>a</sup> Green onto T-1500B^ & T-1500D <sup>a</sup> Worboy Green onto T-1500B OL1000 Worboy Green onto T-1500D OL1000 Red onto T-1500B & T-1500D <sup>a</sup> Red onto T-1501D Yellow* Brown onto T-1500B & T-1500D <sup>a</sup> Black onto T-1500B & T-1500D Black onto T-1501D Yellow	Per Table 2/3 70% of Table 4

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

^ - Daytime Chromaticity does not conform to CR2 colorbox

<sup>a</sup> - Declared performance is 100% of Table 4 values when processed per German requirements.

\* - Combination for which weathering declaration is made under natural weathering protocol.

\* - Declared performance is 50% of red values stated in Table 4.