

# DECLARATION OF PERFORMANCE

Construction Products Regulation 305/2011

No. 2500D-1604

## Prismatic Engineering Grade Retroreflective Sheeting:

- T-2500D PEG Series
- T-2500D PEG Series with 4930 Screen Ink
- T-2500D PEG Series with TrafficJet Ecosolvent Ink & Clear Overlay
- T-2500D PEG Series with TrafficJet UV Ink & Clear Overlay



T-2500D PEG Series, in conjunction with the components listed, is a high-quality, 7-year durable, prismatic 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. Tzus, 060-045345 issued **ETA 18/0544** dated 15/10/2018 & **ETA 20/0687**, **ETA 20/0882** dated 18/01/2021.

Essential Characteristics		Performance	Assessment Document
Daylight Chromaticity		Per Table 3	EAD 120001-01-0106, September 2016
Luminance Factor		Per Table 3	
Coefficient of retro-reflection, Rotational Symmetry		Per Tables 4 & 5, Rotational Variation < 10%	
Impact Resistance		No Effect	
Visibility after Weathering, Natural & Accelerated Artificial	Retroreflection	80% of Initial Requirement	
	Chromaticity & Luminance Factor	Per Table 2 Below	
Adhesion		Peel < 50mm	

The performance of T-2500D PEG Series is in conformance with declarations herein when evaluated per EAD 120001-01-0106. 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	$\geq 0,27$
	y	0,355	0,305	0,325	0,375	
Yellow	x	0,545	0,487	0,427	0,465	$\geq 0,16$
	y	0,454	0,423	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	$\geq 0,14$
	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	
Green 2 (Worboy 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	
Grey	x	0,355	0,305	0,285	0,335	$0,12 \leq \beta \leq 0,18$
	y	0,355	0,305	0,325	0,375	
Black	x	0,385	0,275	0,235	0,345	$\leq 0,03$
	y	0,355	0,250	0,290	0,395	

Notes: A – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EAD 120001-01-0106, Section 2.2.1.

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	$\geq 0,27$
	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	
Orange	x	0,631	0,560	0,506	0,570	$\geq 0,14$
	y	0,369	0,360	0,404	0,429	
Green	x	0,110	0,170	0,170	0,110	$\geq 0,03$
	y	0,415	0,415	0,500	0,500	
Green 2 (Worboy 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	0,130	0,160	0,160	0,130	$\geq 0,01$
	y	0,090	0,090	0,140	0,140	
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>, R<sub>A</sub> (cd/lux/m<sup>2</sup>)

Entrance Angle ( $\beta_1$ , $\beta_2=0^\circ$ )	Observation Angle ( $\alpha$ )	R <sub>A</sub>						
		White	Yellow	Orange	Green	Red	Blue	Brown
5°	0.2°	70	50	25	9	14	4	1
30°		30	22	7	3.5	6	1.7	0.3
5°	0.33°	50	35	20	7	10	2	0.6
30°		24	16	8	3	4	1	0.2
5°	0.5°	30	25	13	4.5	7.5	2	0.3
30°		15	13	4	2.2	3	0.8	0.2
5°	1.0°	5	3	1.8	1	2	0.6	0.2
30°		3	2	1.1	0.8	1	0.3	0.2

Notes: 1 – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EAD 12000-01-0106, Section 2.2.3 averaging  $\epsilon=0^\circ$  and  $90^\circ$ .

Table 5: Coefficients of Retroreflection<sup>2</sup>, R<sub>A</sub> (cd/lux/m<sup>2</sup>)  
(Includes RA1)

Entrance Angle ( $\beta_1$ , $\beta_2=0^\circ$ )	Observation Angle ( $\alpha$ )	R <sub>A</sub>							
		White	Yellow	Orange	Green	Red	Blue	Brown	Grey
5°	0.2°	70	50	25	9	14.5	4	1	42
30°		30	22	10	3.5	6	1.7	0.3	18
40°		10	7	2.2	1.5	2	0.5	-	6
5°	0.33°	50	35	20	7	10	2	0.6	30
30°		24	16	8	3	4	1	0.2	14.4
40°		9	6	2.2	1.2	1.8	-	-	5.4
5°	2.0°	5	3	1.2	0.5	1	-	-	3
30°		2.5	1.5	0.5	0.3	0.5	-	-	1.5
40°		1.5	1	-	0.2	0.5	-	-	0.9

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  $\epsilon=0^\circ$  only.

Table 6: Specific Signing Combination Performance Declarations

Signing Component	Product Name	Colors and Product Number	Declared Retroreflective Detail
Native Sheeting	T-2500D Series	T-2500D White T-2501D Yellow	Per Tables 3 & 4
Electronic Cuttable Overlay <sup>#</sup>	OL1000 OL2000 EC Film Series & 3801 Black	OL-1000 Clear applied to White & Yellow Native Sheeting OL2001 Yellow OL-2005 Blue OL-2007 Green OL-2009 Brown OL-2008 Red OL-2008 Red applied to T-2501D Yellow 3801 Black <sup>^</sup>	Per Tables 3 & 4
<sup>^</sup> Standard Avery Dennison product code is 801, the prefix 3(801) denotes special watermark print for Germany only			
Solvent Screen Ink <sup>#</sup>	4930 Series	Yellow <sup>a</sup> Blue <sup>a</sup> Green <sup>a</sup> Brown Red <sup>a</sup> Red Applied to T-2501D Yellow Black Black Applied to T-2501D Yellow	70% of Tables 3 & 4
Digital Printing Ecosolvent <sup>#</sup>	TrafficJet with OL-1000 Clear	Yellow Blue <sup>a</sup> Green <sup>a</sup> Red <sup>a</sup> Red onto T-2501D Yellow Brown <sup>a</sup> Worboy Green <sup>a</sup> Grey <sup>a</sup> Black Black onto T-2501D Yellow	70% of Tables 3 & 4
Digital Printing UV <sup>#</sup>	TrafficJet with OL-1000 or OL-2000 Clear	Yellow <sup>a</sup> Blue <sup>a</sup> Green <sup>a</sup> Red <sup>a</sup> Brown <sup>a</sup> Worboy Green <sup>a</sup> with OL-1000 only Black	70% of Tables 3 & 4

Notes:

- <sup>#</sup> - Declared performance for components assumes application to white native sheeting unless otherwise noted.
- <sup>a</sup> - Declared performance is 100% of Table 5 values when processed per German requirements.
- <sup>+</sup> - Declared performance is 50% of red values stated in Tables 4 & 5.