

DECLARATION OF PERFORMANCE

Construction Products Regulation 305/2011

No. 6000-1613

High Intensity Prismatic Retroreflective Sheeting:

- T-6500 HIP Series
- T-6500 HIP Series with OL-2000 Transparent EC Film
- T-6500 HIP Series with 4930 Screen Ink
- T-6500 HIP Series with UVTS Screen Ink
- T-6500 HIP Series with 3801 Black Opaque Film
- T-6500 HIP Series with TrafficJet Ecosolvent Ink & Clear Overlay
- T-6500 HIP Series with TrafficJet UV Ink & Clear Overlay



T-6000 HIP Series is a high-quality, 10-year durable, microprismatic retroreflective material with a pressure sensitive adhesive. This product is intended for use on permanent or temporary highway safety devices that require robust Class 2 retroreflective performance.



Manufactured by: Avery Dennison, Reflective Solutions

Willem Einthovenstraat 11, 2342 BH
Oegstgeest, The Netherlands

902 Feehanville Rd.
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. Tzus, 060-045345 issued **ETA 15/0919** dated 18/09/2017 & **ETA 18/0544** dated 15/10/2018 & **ETA 20/0687**, **ETA 20/0882** dated 18/01/2021. Anti-Dew OL1200 included in ETA's 22/0240 & 22/0241 dated 22/08/2022

Essential Characteristics		Performance	Assessment Document
Daylight Chromaticity		Per Table 3	EAD 12001-01-0106, September 2016
Luminance Factor		Per Table 3	
Coefficient of retro-reflection, Rotational Symmetry		Per Tables 4 & 5, Variation < 10%	
Impact Resistance*		No Effect	
Visibility after Weathering, Natural & Accelerated Artificial	Retroreflection	80% of Initial Requirement	
	Chromaticity & Luminance Factor	Per Table 2	
Adhesion		Peel < 50 mm	

*Also tested in accordance with the Dynamic Impact resistance test, DH2 in EN12899-3:2007

The performance of T-6500 HIP 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: 16 November, 2022, Illinois, USA

Classification: Avery Dennison - Internal

Table 2: Daytime Chromaticity and Luminance Factors ^ACR1

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	0,545	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	0,350	0,300	0,285	0,335	$0,12 \leq \beta \leq 0,18$
	y	0,360	0,310	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^A 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	
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	
Grey	x	0,305	0,335	0,325	0,295	$0,11 \leq \beta \leq 0,18$
	y	0,315	0,345	0,355	0,325	
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 Retroreflection¹, R_A (cd/lux/m²)

Entrance Angle (β_1 , $\beta_2=0^\circ$)	Observation Angle (α)	R _A							
		White	Yellow	Orange	Green	Red	Blue	Brown	Worboy Green
5°	0.2°	360	270	145	50	65	30	18	20
30°		170	135	68	25	30	14	8.5	15
5°	0.33°	180	120	65	21	25	14	8	14
30°		100	70	40	12	14	8	5	11
5°	0.5°	150	110	60	21	27	13	7.5	7.5
30°		72	54	28	10	13	6	3.5	3.5
5°	1.0°	35	26	12	4	5.2	2	1	1
30°		20	15	6.8	2	3	1	0.6	0.6

Notes: ¹ – When material is sampled, processed and tested per Avery Dennison Product Data Bulletins, Instructional Bulletins, and EAD 120001-01-0106, Section 2.2.3 with averaging of $\epsilon=0^\circ$ and 90°

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 $\epsilon=0^\circ$ only.

Table 6: Component Performance Detail

Signing Component	Product Name	Product Combination, Color and Number	Detailed Retroreflective Performance
Native Sheeting	T-6500 Series	T-6500 White T-6501 Yellow W-6504 Orange with OL-2000 Clear T-6505 Blue T-6507 Green T-6508 Red T-6509 Brown	Per Tables 4 & 5
Electronic Cuttable Overlay [#]	OL-1000 OL-2000 OL-1200 EC Film & 3801 Black	OL-2000/1000/1200 Clear applied to White & Yellow Native Sheeting OL-2001 Yellow ^a OL-2004 Orange ^a OL-2005 Blue ^a OL-2007 Green ^a OL-2008 Red ^a OL-2008 Red applied to Yellow T-6501 ⁺ OL-2009 Brown ^a 3801 Black [^]	70% of Tables 4 & 5
^Standard Avery Dennison product code is 801, the prefix 3(801) denotes special watermark print for Germany only			
Solvent Screen Ink [#]	4930 Series	Yellow ^a Orange with OL-2000 Clear ^a Blue ^a Green ^a Red ^a Red applied to Yellow T-6501 ⁺	70% of Tables 4 & 5
UV Screen Ink [#]	UVTS with UV Clearcoat	Blue Red Red onto Yellow T-6501 ⁺ Black	70% of Tables 4 & 5
Digital Printing Ecosolvent [#]	TrafficJet with OL-1000 or OL-2000 Clear or OL1200 Anti-Dew	Yellow Blue Green Red Red onto T-6501 Yellow Brown Worboy Green (not OL-2000) Grey with OL-1000 only Black Black onto T-6501 Yellow	70% of Tables 4 & 5
Digital Printing UV [#]	TrafficJet with OL-1000 or OL-2000 Clear OL1200 Anti-Dew	Yellow ^a Blue ^a Green ^a Red ^a Red onto Yellow T-6501 ⁺ Worboy Green ^a (not OL-2000) Brown ^a Black Black onto Yellow T-6501	70% of Tables 4 & 5

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

^a - Declared performance is 100% of Table 5 values when processed per German requirements.

* - Avery Dennison recommends a 15% thinning of the 4930 Yellow ink to meet 100% requirement of table 4.

⁺ - Declared performance is 50% of red values stated in Tables 4 & 5.