

Product Bulletin

Reflexite[®] Super Bright ESP Roll-Up Sign

The Product

Reflexite Super Bright flexible roll-up sign blanks are made from fabric reinforced microprism retroreflective sheeting. These sign blanks are suitable for fabrication of retroreflective roll-up construction and maintenance signs that meet the requirements of the Manual on Uniform Traffic Control Devices (MUTCD).

Construction

Reflexite Super Bright Roll-Up Signs consist of a white, yellow or fluorescent orange microprismatic retroreflective sheeting heat sealed to a heavy duty vinyl coated fabric. The sizes of the blanks shall be those specified by the purchasing agency.

Microprismatic Sheeting Requirements

Reflexite Super Bright Roll-Up Signs consist of a high gloss transparent UV stabilized film bonded to a layer of cube corner prisms. There are not less than 47,000 prisms per square inch.

Reflectivity

Reflexite Super Bright Roll-Up Signs shall have the minimum coefficient of retroreflection shown in Table 1 when tested in accordance with ASTM E810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting".

Daytime Color

Reflexite Super Bright Roll-Up Signs conform to the daytime color requirements in Table 2 when tested in accordance with ASTM D4956. The four pairs of coordinates determine the acceptable color when measured with standard illuminant D₆₅.

Nighttime Color

Reflexite Super Bright Roll-Up Signs conform to the nighttime color requirements in Table 3 when tested in accordance with ASTM E811. The sheeting shall be measured at 0.33° observation angle, 5° entrance angle. The four pairs of coordinates, calculated in the x, y system in accordance with ASTM E308, determine the acceptable color when measured with standard illuminant A.

Impact Resistance

Reflexite Super Bright Roll-Up Signs shall show no signs of cracking or delaminating outside the actual area of impact when subjected to an impact of 11.3 N•m (100 inch-pound) generated by a 1.8kg (4.0 pound) weight with a 16mm (0.625") rounded tip on a Gardner variable impact tester, IG-1120, as per ASTM D4956..

Enhanced Surface Preparation (ESP)

Reflexite Super Bright Roll-Up Signs have a unique Enhanced Surface Preparation (ESP), which eliminates the need for a thorough cleaning (e.g. alcohol wipe) prior to screen-printing. It is still good business practice to wipe the surface with a clean, dry tack cloth. Enhanced Surface Preparation allows the use of vinyl graphics using pressure sensitive adhesives. Also, Enhanced Surface Preparation reduces the amount of dust, dirt and other road grime that can stick to Reflexite Super Bright Roll-Up Signs.

Solvent Resistance

Reflexite Super Bright Roll-Up Signs will not dissolve, blister, or pucker when wiped with a soft cloth wet with kerosene, mineral spirits, turpentine, VM&P Naphtha, 5% HCL, NaOH, or methanol.

Specular Gloss

Reflexite Super Bright Roll-Up Signs have a specular gloss not less than 40 when tested in accordance with ASTM D4956, section 7.12.

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TABLE 1
COEFFICIENT OF RETROREFLECTION
 (Candelas/Lux/Square Meter)

Observation Angle	Entrance Angle	White	Fluorescent Orange	Yellow
0.20°	- 4°	500	200	350
0.20°	+ 30°	200	80	140
0.50°	- 4°	225	90	160
0.50°	+ 30°	85	34	60

TABLE 2
DAYTIME COLOR SPECIFICATION LIMITS
 Chromaticity Coordinates*

Color	1		2		3		4		Luminance Factor (Y%)	
	x	y	x	y	x	y	x	y	Min.	Max.
White	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329	27	---
Fluorescent Orange	0.583	0.416	0.535	0.400	0.595	0.351	0.645	0.355	25	---
Yellow	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472	15	45

* The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with CIE Standard Illuminant D₆₅.


TABLE 3
NIGHTTIME COLOR SPECIFICATION LIMITS
 Chromaticity Coordinates**

Color	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0.475	0.452	0.360	0.415	0.392	0.370	0.515	0.409
Fluorescent Orange	0.625	0.375	0.589	0.376	0.636	0.330	0.669	0.331
Yellow	0.513	0.487	0.500	0.470	0.545	0.425	0.572	0.425

** The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with CIE Standard Illuminant A.

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