

Product Bulletin

Reflexite® Fluorescent Daybright® V97 Conspicuity Material



The Product

Reflexite Fluorescent Daybright V97 Conspicuity Material is a tough, weather-and solvent-resistant product designed for rugged outdoor use for graphics applications on vehicles. The product is die cuttable, plotter cuttable, and easy to apply to smooth painted or unpainted vehicle surfaces.

Construction

Reflexite Fluorescent Daybright V97 Conspicuity Material is composed of cube corner (microprism) retroreflective elements integrally bonded to a flexible, smooth-surfaced tough and weather-resistant UV stabilized polymeric film. The prism surfaces are coated with a vacuum deposition of aluminum to provide a mirror surface to the prism facets. The material includes an aggressive high-tack pressure sensitive adhesive.

Colors

Reflexite Fluorescent Daybright V97 Conspicuity Material is available in fluorescent lime and fluorescent orange. The colors conform to the requirements in Table 1 when tested in accordance with ASTM practices E308 and E1164 and standards E1347 and E1349. The measured values are the average of eight readings. The test sample is rotated 45° about its own axis after each reading.

The material features Reflexite Daybright® technology to provide brighter more vivid daytime colors than previously available in metalized microprism sheeting.

Reflectivity

Reflexite Fluorescent Daybright V97 Conspicuity Material shall meet or exceed the minimum coefficient of retroreflection shown in Table 2. The sheeting shall be measured in accordance with ASTM E810. Rotation angles of 0° and 90° are measured and averaged.

TABLE 1
COLOR SPECIFICATION LIMITS
Chromaticity Coordinates*

Color	1		2		3		4		Reflectance Y	
	x	y	x	y	x	Y	x	y	Min.	Max.
Fl Lime	0.387	0.610	0.369	0.546	0.428	0.496	0.460	0.540	50	----
Fl Orange	0.583	0.416	0.535	0.400	0.595	0.351	0.645	0.355	14	30

* 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 2
COEFFICIENT OF RETROREFLECTION
(Candelas/Lux/Square Meter)

Observation Angle	Entrance Angle	Fluorescent Lime	Fluorescent Orange
.2°	-4°	325	200
.2°	30°	180	100
.5°	-4°	60	30
.5°	30°	25	25

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Adhesive

The adhesive is specially formulated to adhere to a variety of surfaces including: painted steel, clear coat lacquer, and aluminum. The adhesive is protected by a release liner that shall be removed by peeling, without soaking in water or other solvents. The adhesive produces a bond such that a one inch wide strip shall support a 1-3/4 pound weight for five minutes without the strip peeling a distance of more than two inches when applied to a smooth aluminum surface.

Impact Resistance

Following application to a smooth surface aluminum rectangle 0.020 inch by 3 inch by 6 inch, the specimen is conditioned for 24 hours at 72°F and 50% relative humidity. The sheeting shall show no cracking or delamination outside the actual area of impact when the face of the panel is subjected to an impact of a two pound weight with a 5/8 inch rounded tip dropped from a 100 inch pound setting on a Gardner variable impact tester, IG-1120.

Shrinkage

A 9 inch by 9 inch specimen of the sheeting with liner is conditioned a minimum of one hour at 72° F and 50% relative humidity. The liner is then removed and the specimen is placed on a flat surface with the adhesive side up. Ten minutes after the liner is removed and again after 24 hours, the specimen is measured to determine the amount of dimensional change. The specimen will not shrink in any dimension more than 1/32 inch in 10 minutes and 1/8 inch in 24 hours when tested in accordance with ASTM D4956.

Flexibility

The sheeting is conditioned for 24 hours at 72°F and 50% relative humidity. The release liner is removed and the sheeting is sufficiently flexible to show no cracking when bent in one second's time around a 1/8 inch diameter mandrel with the adhesive contacting the mandrel.

Solvent Resistance

Reflexite Fluorescent Daybright V97 Conspicuity Material meets the solvent resistance requirements of LS-300C solvent resistance, section 3.6.7, when tested as specified in Table VI, test method 4.4.6.

Specular Gloss

The sheeting shall have a specular gloss of not less than 40 when tested in accordance with ASTM method D523 at an angle of 85°.

Application

Material should be applied to a smooth, clean, dry surface at temperatures ranging from 50°F to 100°F.

Please reference the Reflexite Fluorescent Daybright V97 Conspicuity Material Application Instructions for further details.

Warranty

5 year limited warranty.
Contact your Reflexite representative for details.

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