

Description

Reflexite® VC 212 HiPerformance is a tough weather resistant product designed for outdoor use for various livery applications including emergency services vehicles. The material is die cuttable and plotter cuttable, and easy to apply onto smooth painted or unpainted vehicle surfaces.

Product Construction

Reflexite® VC 212 HiPerformance is composed of cube corner (microprism) retroreflective elements integrally bonded to a flexible, smooth-surfaced tough and weather resistant UV stabilised polymeric film. The prism surfaces are coated with a vacuum deposition of aluminium to provide a mirror surface to the prism facets. The resulting material is not more than 0,20 mm thick, and comes with an aggressive high-tack pressure sensitive adhesive. It is single layer, with no need for edge sealing. Printing on the material is not recommended.

Film Logo Pattern



Colour

Reflexite® VC 212 HiPerformance is available in silver, blue, yellow, green and red. The colour shall be located in the area defined by the chromaticity coordinates and luminance factor provided in Table 2, when measured in accordance with the provisions of CIE No.15.2. The four pairs of coordinates determine the acceptable colour when measured with standard illuminant D₆₅ using a Hunter LabScan.

Retroreflectivity

Typical values for the coefficient of retroreflection for Reflexite® VC 212 HiPerformance are shown in Table 1 when illuminated with CIE standard illuminant A and measured with the provisions of CIE no. 54. The values are an average of rotation angles 0° and 90°.

Impact Resistance

Reflexite® VC 212 HiPerformance shall show no signs of cracking or delamination outside the actual area of impact when it is subjected to an impact of 1,13 N·m generated by a 0,91 kg weight with a 16 mm rounded tip on a Gardner variable impact tester, IG-1120. As per ASTM D4956.

Adhesive

The adhesive is protected by a release liner, which shall be removed by peeling, without soaking in water or other solvents. A 25 mm strip shall provide a bond such that it shall support an 800 g weight for 5 minutes without the strip peeling for a distance of more than 50 mm when applied to a smooth aluminium surface as specified in the ASTM 4956 adhesion test.

Printing

The material is not printable.

Application Instructions

Material must be applied when the air and surface temperature is between 15° C and 38° C to assure proper adhesive bonding. Surfaces must be cleaned for all grease, oil and dirt. Use a clean towel and Isopropyl alcohol or similar to wipe the surface before application. If any air bubbles are trapped, use a pin to puncture the bubble and a squeegee to push the air towards the pinhole. Contact ORAFOL for complete application instructions.

Shelf Life

The sheeting must be used within 1 year from the shipment date. All rolls including partially used rolls should be stored in original packaging, tightly wound. Store in a clean and dry area, away from direct sunlight. Store at 20° C and 50% relative humidity.

Warranty

Reflexite® VC 212 HIPerformance has a five year warranty. Please contact ORAFOL for full details.

Table 1 – Retroreflectivity

Entrance Angle (Beta = β_1)	Colour				
	White	Blue	Green	Yellow	Red
0,2° / 5°	325	25	55	220	55
0,2° / 30°	150	11	25	100	25
0,2° / 40°	110	8	12	70	12
0,33° / 5°	180	14	21	120	25
0,33° / 30°	100	8	12	70	14
0,33° / 40°	95	7	11	60	13
2,0° / 5°	5	0,2	0,5	3	1
2,0° / 30°	2,5	0,1	0,3	1,5	0,4
2,0° / 40°	1,5	-	0,2	1	0,3

All values have units of cd/lux/m².

Table 2 - Colour Specification Limits and Reference Standards

Colour	Chromaticity Coordinates*								
	1		2		3		4		Y%
	x	y	x	y	x	y	x	y	Min.
Silver	0,303	0,300	0,368	0,366	0,340	0,393	0,274	0,329	27,0
Blue	0,140	0,035	0,244	0,210	0,190	0,255	0,065	0,216	1,0
Red	0,735	0,265	0,700	0,250	0,610	0,340	0,660	0,340	3,0
Green	0,026	0,399	0,166	0,364	0,286	0,446	0,207	0,771	3,0
Yellow	0,498	0,412	0,557	0,442	0,479	0,520	0,438	0,472	15,0

*) The four pairs of chromaticity coordinates determine the acceptable chromaticity when measured with standard illuminant D65 using a Hunter LabScan spectrophotometer.

IMPORTANT NOTICE

All Reflexite® and ORALITE® products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning Reflexite® and ORALITE® products is based upon research which the Company believes to be reliable although such information does not constitute a warranty. Because of the variety of uses of Reflexite® and ORALITE® products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use. All specifications are subject to change without prior notice.

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