

Technical Product Bulletin

Reflexite® VC104 Curtain Grade

Contour and line marking for vehicle recognition
Approval: Regulation ECE104 Class C
Bulletin #100-12



Product

Reflexite® VC104 Curtain Grade is a tough weather and solvent resistant product designed for rugged outdoor use. The material is intended for application as line- or contour marking on curtains for trucks and trailers.

Product approval

Approved to Regulation ECE104 Class C.

Construction

Reflexite VC104 Curtain Grade 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 to provide a mirror surface to the prism facets. The resulting material is not more than 0,30mm thick and comes with an aggressive high-tack pressure sensitive adhesive or a heat activatable adhesive. The product is single layer, with no need for edge sealing.

Colour

Reflexite VC104 Curtain Grade is available in yellow, white and red. The colours conform to the requirements of Regulation ECE104. The colour shall be located in the area defined by the chromaticity coordinates and luminance factor provided in Table 1, when measured in accordance with the provisions of CIE No. 15 and illuminated with the CIE standard illuminant D_{65} at an angle of 45° to the normal and viewed along the normal ($45^\circ / 0^\circ$ geometry). The measured value shall be the average of 8 readings. The test sample shall be rotated 45 degrees.

The retro-reflected colour (night-time colour), when illuminated with CIE standard illuminant A at an observation angle of $20'$ and entrance angle of $\beta_1 = \pm 5^\circ$, and $\beta_2 = 0^\circ$ shall be located within the area defined by the chromaticity coordinates in Table 2.

Reflectivity

Reflexite® VC104 Curtain Grade complies with the minimum reflectivity requirements of Regulation ECE104 Class C. When illuminated with CIE standard illuminant A and measured with the provisions of CIE no.54, the coefficient of retro-reflection (R') for Reflexite VC104 Curtain Grade shall not be less than the values in Table 3.

Pressure Sensitive Adhesive (PSA)

The adhesive is specially formulated to adhere to curtain side materials typically constructed of PVC coated polyester fabric. The adhesive is protected by a release liner which shall be removed by peeling, without soaking in water or other solvents. The adhesive produces such a bond that a 25mm strip shall require a force of at least 10N (2,25 pounds), at a speed of 300mm per minute, to be removed from the substrate after 24 hours.

Heat Activated Adhesive (HA)

The heat activated adhesive is specially formulated to adhere to new curtain side materials typically constructed of PVC coated polyester fabric. The heat activated adhesive may be applied to the curtain side material with the use of heat or with the use of High Frequency (HF)

Application Instructions

Please contact Reflexite for complete application instructions.

Film Logo Pattern



Roll Size

Standard rolls are 50mm x 50m.

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, lying flat. Store in a clean and dry area, away from direct sunlight. Store at room temperature 23°C and at 50% r.h.

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Table 1
Colour Specification Limits (daytime)

Colour	Chromaticity Coordinates on CIE diagram*							
	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0,300	0,270	0,385	0,355	0,345	0,395	0,260	0,310
Yellow	0,545	0,454	0,487	0,423	0,427	0,483	0,465	0,534
Red	0,690	0,310	0,595	0,315	0,569	0,341	0,655	0,345

*) The four pairs of chromaticity coordinates determine the acceptable chromaticity on the CIE diagram

Table 2
Colour Specification Limits (nighttime)

Colour	Chromaticity Coordinates on CIE diagram*							
	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0,373	0,402	0,417	0,359	0,450	0,513	0,548	0,414
Yellow	0,585	0,385	0,610	0,390	0,520	0,480	0,505	0,465
Red	0,720	0,258	0,735	0,265	0,665	0,335	0,643	0,335

*) The four pairs of chromaticity coordinates determine the acceptable chromaticity on the CIE diagram

Table 3
Coefficient of Retroreflection (R')

Obs. Angle	Entrance Angle	Entrance angle (Beta=β)				
		0°	0°	0°	0°	0°
0,33°	Beta 1 (β ₁) Beta 2 (β ₂)	5°	20°	30°	40°	60°
White	R'	450	n/a	200	90	16
Yellow	R'	300	n/a	130	75	10
Red	R'	120	60	30	10	n/a

*) The coefficient of retroreflection (R_A) has units of cd/lux/m²

Warranty

Reflexite® VC104 Curtain Grade has a 3 year warranty when applied onto new curtains.
Please contact Reflexite for full details.

IMPORTANT NOTICE

All Reflexite 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 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 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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