

## Product

Reflexite® VC104+ Rigid Grade is a tough weather and solvent resistant product designed for rugged outdoor use. The material is intended for application as conspicuity marking on trucks and trailers with rigid sides.

## Product approval

Approved to Regulation ECE104 Class C.

## Construction

Reflexite VC104+ Rigid 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 0,16mm thick and comes with an aggressive high-tack pressure sensitive adhesive. The product is single layer, with no need for edge sealing.

## Colour

Reflexite VC104+ Rigid 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<sub>65</sub> at an angle of 45° to the normal and viewed along the normal (45° / 0° 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+ Rigid 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 Rigid Grade shall not be less than the values in Table 3.

## Adhesive

The adhesive is protected by a release liner, which shall be removed by peeling, without soaking in water or other solvents.

A 25mm strip shall provide a bond such that it shall support a 800g weight for 5 minutes without the strip peeling for a distance of more than 50mm when applied to a smooth aluminium surface as specified in the ASTM 4956 adhesion test.

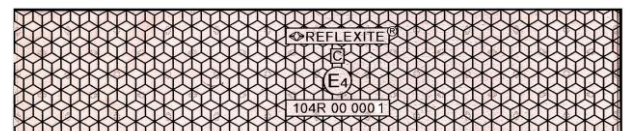
The adhesive service temperature ranges from -40°C to +90°C (\*).

(\*) Data based on laboratory testing and under no load. The practical service temperature is dependent on variables including the substrates being bonded, environmental conditions, the loading and method of application.

## 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 pin hole. Please contact Reflexite for complete application instructions.

## Film Logo Pattern



## Roll Size

Standard rolls are 50mm x 50m.

## Shelf Life and Storage

The sheeting must be used within 2 years from the date of manufacture (this date is stated on the label on each roll).

All rolls including partially used rolls should be stored in original packaging, lying flat, tightly wound around a 3" diameter core and taped. Store in a clean and dry area, away from direct sunlight. Store at room temperature 23° C and 50% r.h.

**Table 1**  
**Colour Specification Limits (daytime)**

Colour	Chromaticity Coordinates on CIE diagram*								
	1		2		3		4		Y
	x	y	x	y	x	y	x	y	
<b>White</b>	0,300	0,270	0,385	0,355	0,345	0,395	0,260	0,310	> 0,25
<b>Yellow</b>	0,545	0,454	0,487	0,423	0,427	0,483	0,465	0,534	> 0,16
<b>Red</b>	0,690	0,310	0,595	0,315	0,569	0,341	0,655	0,345	> 0,03

\*) Measured in accordance with the provisions of CIE N° 15 and illuminated with the CIE standard illuminant D<sub>65</sub> (geometry 45/0°)

**Table 2**  
**Colour Specification Limits (nighttime)**

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

\*) Measured in accordance with the provisions of CIE N 15 and illuminated with the CIE standard illuminant D<sub>65</sub> (geometry 45/0)

**Table 3**  
**Coefficient of Retroreflection (R')**

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

\*) The coefficient of retroreflection (R<sub>A</sub>) has units of cd/lux/m<sup>2</sup>

## Warranty

Reflexite® VC104+ Rigid Grade has a 10 year warranty. Please contact Reflexite for full details.

### 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.