

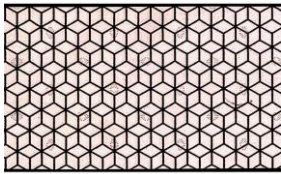
Description

ORALITE® VC 170 Universal Film is a tough weather resistant product designed for rugged outdoor use. The material is die cuttable and plotter cuttable, and easy to apply onto smooth painted or unpainted surfaces.

Product Construction

ORALITE® VC 170 Universal Film 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. The product is single layer, with no need for edge sealing.

Film Logo Pattern



Colour

ORALITE® VC 170 Universal Film is available in white, yellow and red colours. 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

When illuminated with CIE standard illuminant A and measured with the provisions of CIE No. 54, typical coefficients of retroreflection for ORALITE® VC 170 Universal Film are provided in Table 1 when rotation angles of 0° and 90° are measured and averaged.

Impact Resistance

ORALITE® VC 170 Universal Film sheeting 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, 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 a 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. ORALITE® VC 170 Universal Film may be used on stainless steel when used with the correct pressure sensitive adhesive, which should be requested when ordering.

Flexibility

The sheeting is conditioned for 24 hours at 22° C and 50% RH. The release liner is removed and the sheeting must be sufficiently flexible to show no cracking when bent in one second's time around a 3,1 mm diameter mandrel with the adhesive contacting the mandrel.

Application Instructions

Material must be applied when the film and substrate 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 squeegee to push the air towards the pin hole.

Please contact ORAFOL for complete application instructions.



Product Size

The product is available in standard roll widths of 610 mm and 1235 mm. Please contact ORAFOL for additional sizes.

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.

Table 1
Retroreflectivity (Typical Values)

Observation Angle	Entrance Angle (β)					
	Beta 1 (β_1)	0°	0°	0°	0°	0°
20' (0,33°)	Beta 2 (β_2)	5°	20°	30°	40°	60°
White	R'	450	n/a	200	95	16
Yellow	R'	300	n/a	130	75	10
Red	R'	120	60	30	10	n/a

All values have units of cd/lux/m².

Table 2
Colour Specification Limits (Daytime)

Colour	Chromaticity Coordinates*								Y
	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	> 0,25
Yellow	0,545	0,454	0,487	0,423	0,427	0,483	0,465	0,534	> 0,16
Red	0,690	0,310	0,595	0,315	0,569	0,341	0,655	0,345	> 0,03

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

IMPORTANT NOTICE

All 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 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 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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