

# ORALITE® V99 School Bus Conspicuity Sheeting

(Formerly a Reflexite Branded Product)

Technical Datasheet  
12/2015  
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## Description

ORALITE® V99 School Bus Conspicuity Sheeting is a tough weather-and solvent-resistant product designed for rugged outdoor use on the sides, rear and exit points of school buses. It is easy to apply to smooth surfaces or to surfaces where tape must be cut around rivets and other design features.

## Product Construction

ORALITE® V99 School Bus Conspicuity Sheeting 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 resulting tape is not more than 0.008 inches thick and comes with an aggressive high-tack pressure-sensitive adhesive.

## Reflectivity

ORALITE® V99 School Bus Conspicuity Sheeting shall meet or exceed the minimum coefficient of retroreflection shown in Table 1. Reflexite V99 School Bus Conspicuity Sheeting shall be measured in accordance with ASTM E810.

## Color

ORALITE® V99 School Bus Conspicuity Sheeting is available in school bus yellow color. The color conforms to the requirements in Table 2 when tested in accordance with ASTM 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.

## Adhesive

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 1" (50 mm) strip shall support a 1 3/4 pound (0.79 kg) weight for 5 minutes without the strip peeling for a distance of more than 2" (50 mm) when applied to a smooth aluminum surface as specified in the ASTM D4956, section 7.5 adhesion test.

## Impact Resistance

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

## 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" diameter mandrel with the adhesive contacting the mandrel.

## Solvent Resistance

ORALITE® V99 School Bus Conspicuity Sheeting meets the 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°.

## Shrinkage

A 9" x 9" 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" in 10 minutes and 1/8" in 24 hours.

## Application Instructions

The recommended application temperature to achieve best results is 65°F or above. The adhesive on ORALITE® V99 School Bus Conspicuity Sheeting has been formulated to bond at temperatures as low as 0°F. When bonding at low temperatures the surface should be free from ice, frost, condensation as well as any contaminants. For additional information please refer to the ORALITE® V99 School Bus Conspicuity Sheeting Application Instructions.

## Warranty

ORALITE® V99 has a 10 year warranty. Please contact ORAFOL Americas for details.



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**Table 1**  
**Coefficient of Retroreflection<sup>†</sup>(R<sub>A</sub>)**

Observation Angle	Entrance Angle	Yellow
0.20°	-4°	310
	30°	165
0.50°	-4°	136
	30°	45

<sup>†</sup> Candelas/Lux/Square Meter

**Table 2**  
**Color Specification Limits**

Color	Chromaticity Coordinates*								Luminance Factor (Y%)	
	1		2		3		4		Min.	Max.
	x	y	x	y	x	y	x	y		
<b>Yellow</b>	0.484	0.455	0.517	0.482	0.544	0.455	0.513	0.426	10.0	36.0

\* The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with Standard Illuminant D65.

### Film Logo Pattern



### 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.

WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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