

Description

ORALITE® V59 School Bus Conspicuity Sheeting is highly reflective, weatherproof, self-adhesive sheeting with excellent corrosion and solvent resistance for the reflectorization on the sides, rear and exit points of school buses. ORALITE® V59 School Bus Conspicuity Sheeting meets the requirements of FMVSS No. 217, Bus Emergency Exits and Window Retention and Release.

Product Construction

ORALITE® V59 School Bus Conspicuity Sheeting consists of sealed cells of air backed microprisms, using total internal reflection. The distinct shape of the sealing identifies the machine direction and the manufacturer of the sheeting (see drawing).

Reflectivity

ORALITE® V59 School Bus Conspicuity Sheeting shall meet and/or exceed the minimum coefficient of retroreflection (R_A) shown in Table 1 when tested in accordance with ASTM E810, "Standard Test Method for Coefficient of Retroreflection of Retroreflective Sheeting Utilizing the Coplanar Geometry". ORALITE® V59 School Bus Conspicuity Sheeting fully meets and/or exceeds the requirements of FMVSS No. 217.

Daytime Color

ORALITE® V59 School Bus Conspicuity Sheeting conforms to the daytime color requirements in Table 2 when tested in accordance with ASTM D4956. ORALITE® R59 Rail Conspicuity Sheeting is available in yellow.

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.

Weatherability

ORALITE® V59 School Bus Conspicuity Sheeting meets the requirements of ASTM D4956, Section 6.4. The material is weather resistant and shows no appreciable cracking, scaling, pitting, blistering, edge lifting, or curling, or more than 1/32" (0.8 mm) shrinkage or expansion. Retroreflectivity measurements are conducted after outdoor weathering with an observation angle of 0.20° and entrance angles of -4° and +30°. The minimum coefficient of retroreflection (R_A) after weathering is 80% of the values specified in Table 1.

Solvent Resistance

ORALITE® V59 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

ORALITE® V59 School Bus Conspicuity Sheeting shall have a specular gloss of not less than 40 when tested in accordance with ASTM D523 at an angle of 85°.

Shrinkage

A 9 inch by 9 inch [229mm by 229mm] specimen of the sheeting with liner is conditioned a minimum of one hour at 72°F [23°C] 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 inch [0.8mm] in 10 minutes and 1/8 inch [3.2mm] in 24 hours.

Application Instructions

It is recommended that the application temperature to achieve best results is 65°F [18°C] or above.



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Warranty

10 year limited warranty. Contact your ORAFOL Americas Inc. representative for details.

Table 1
Coefficient of Retroreflection (R_A)*

Observation Angle	Entrance Angles	Yellow
0.20°	-4°	400
	30°	220
0.50°	-4°	136
	30°	45

* all values have units of cd/ft² (cd/lx/m²)

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		
Yellow	0.484	0.455	0.517	0.482	0.544	0.455	0.513	0.426	10	36

† The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Standard Colorimetric System measured with CIE 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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