

Description

ORALITE® R82 Conspicuity Material is a tough weather- and solvent-resistant product designed for rugged outdoor use on the sides and rear of rail cars, locomotives and all types of vehicles and equipment. It is easy to apply to smooth surfaces or to surfaces where tape must be cut around rivets and other design features. The ORALITE® R82 material comes with the visible FRA-224 certification mark.

Product Construction

ORALITE® R82 Conspicuity Material 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 .008 inches thick and comes with an aggressive high-tack pressure-sensitive adhesive.

Reflectivity

ORALITE® R82 Conspicuity Material shall meet or exceed the minimum coefficient of retroreflection shown below. The ORALITE® Conspicuity Material shall be measured in accordance with ASTM E810 and rotation angles of 0° and 90°. See Table 1.

Color

ORALITE® R82 Conspicuity Material is available in yellow and white. The colors conform to the requirements in the following table 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. See Table 2.

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-surfaced aluminum rectangle 0.040 inch by 3.0 inch by 6.0 inch, the specimen is conditioned for 24 hours at 72° F and 50% relative humidity. The sheeting shall show no cracking or delamination outside the actual area of impact when the face of the panel is subjected to an impact of a 4.0 pound weight with 5/8 inch rounded tip dropped from a 100 inch-pound 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 inch diameter mandrel with the adhesive contacting the mandrel.

Solvent Resistance

ORALITE® R82 Conspicuity Material meets the requirements of LS-300C solvent resistance, section 3.6.7, when tested as specified in Table VI, test method 4.4.6.

Shrinkage

A 9 inch by 9 inch specimen of the sheeting with liner is conditioned a minimum of 1 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 inch in 10 minutes and 1/8 inch in 24 hours.

Application Instructions

Material must be applied when the air and surface temperature is between 50-100°F to ensure proper adhesive bonding. Surfaces must be cleaned of all grease, oil, dirt etc. Use a clean cloth 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 ORAFOL Americas for complete application instructions.

Warranty

ORALITE® R82 Conspicuity Sheeting has a 10 year warranty. Please contact ORAFOL Americas for full details



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Table 1, Coefficient of Retroreflection†(R_A)

Observation Angle	Entrance Angle	White	Yellow
0.20°	-4°	700	470
	30°	400	270
0.50°	-4°	160	110
	30°	75	51

† Candelas/Lux/Square Meter

Table 2, Color Specification Limits (Daytime)

Color	Chromaticity Coordinates*								Luminance Factor (Y%)	
	1		2		3		4		Min.	Max.
	x	y	x	y	x	y	x	y		
White	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329	15	---
Yellow	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472	12	30

* 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



Note:

All ORALITE® products are manufactured within an ISO 9001:2015 controlled manufacturing environment and batch traceability is possible on the basis of the roll number.

IMPORTANT NOTICE

When using ORALITE® sheeting, please comply with relevant national specifications. ORAFOL® recommends obtaining the current requirements from your local authority and ensure product conformance with such requirements. Please contact ORAFOL® for further information.

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 may expose you to chemicals which are known in the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to – www.P65Warnings.ca.gov

ORALITE® is a trademark of ORAFOL Europe GmbH



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