

## Description

ORALITE<sup>®</sup> High Impact Channelizer Tape is a tough, weather resistant, highly reflective, reboundable sheeting designed for rugged construction work zone use. This material is easy to apply to smooth, flame-treated polyethylene surfaces.

## Product Construction

ORALITE<sup>®</sup> High Impact Channelizer Tape consists of a high gloss, transparent, uv-stabilized microprismatic retroreflective layer.

## Reflectivity

ORALITE<sup>®</sup> High Impact Channelizer shall have 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<sup>®</sup> High Impact Channelizer Tape fully meets or exceeds the requirements of ASTM D4956 for types III and IV workzone sheeting materials.

## Daytime Color

ORALITE<sup>®</sup> High Impact Channelizer conforms to the daytime color requirements in Table 2 when tested in accordance with ASTM D4956 using a HunterLab ColorFlex. ORALITE<sup>®</sup> High Impact Channelizer is available in white, yellow, orange, red, and fluorescent yellow-green.

## Nighttime Color

ORALITE<sup>®</sup> High Impact Channelizer conforms to the nighttime color requirements in Table 3 when tested in accordance with ASTM D4956 and ASTM E811. The sheeting shall be measured using CIE illuminant A, an observation angle of 0.33° and an entrance angle of +5°.

## 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

Ambient Temperature: After conditioning a sample of sealed roll-up sign for 24 hours at 73° ± 3°F (23° ± 2°C) and 50% relative humidity, subject the sheeting to an impact of a 4 lb (1.82 kg) weight with a 5/8" (16 mm) rounded tip dropped from a 100 in-lb (11.3 N-m) setting on a Gardner variable impact tester, IG-1120, as per ASTM D4956, section S2.2.1. The sheeting shall show no cracking or delamination outside the actual area of impact.

## Flexibility

ORALITE<sup>®</sup> High Impact Channelizer Tape meets the flexibility requirements of ASTM D4956, section 6.7 and S2.2.2. The sheeting is sufficiently flexible to show no cracking when bent in one second time around a 1/8" (3.2 mm) diameter mandrel.

## Weatherability

ORALITE<sup>®</sup> High Impact Channelizer Tape 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.

When tested in a xenon-arc weatherometer in accordance with ASTM D4956, section S3 ORALITE<sup>®</sup> High Impact Channelizer tape will meet or exceed the weathering requirements. Upon request, one year outdoor weathering data (NTPEP) are available.

## Solvent Resistance

ORALITE<sup>®</sup> High Impact Channelizer Tape will not dissolve, blister, or pucker when wiped with a soft cloth wet with kerosene, mineral spirits, turpentine, VM&P Naphtha, 5% HCL NaOH, or methanol.

## Specular Gloss

ORALITE<sup>®</sup> High Impact Channelizer Tape shall have a specular gloss of not less than 40 when tested in accordance with ASTM D523 at an angle of 85°.



ORAFOL Americas – GA  
1100 Oracal Parkway  
Black Creek, GA 31308  
Phone: 888.672.2251

ORAFOL Americas – CT  
120 Darling Drive  
Avon, CT 06001  
Phone: 800.654.7570

ORAFOL Canada  
2831 Bristol Circle  
Oakville, Ontario L6H 6X5  
Phone: 888.727.3374

## Shrinkage

A 9" x 9" (229 mm x 229 mm) specimen of the sheeting with liner is conditioned a minimum of one hour at 73° ± 3°F (23° ± 2°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" (0.8 mm) in 10 minutes and 1/8" (3.2 mm) in 24 hours.

**Table 1, Coefficient of Retroreflection (R<sub>A</sub>)\***

Observation Angle	Entrance Angle	White	Yellow	Orange	Red	Fluorescent Yellow-Green
0.20°	-4°	360	270	145	65	290
0.20°	30°	170	135	68	30	135
0.50°	-4°	150	110	60	27	120
0.50°	30°	72	54	28	13	55

\*all values have units of cd/ft<sup>2</sup> (cd/lx/m<sup>2</sup>)

**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	27	---
Yellow	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472	15	45
Orange	0.558	0.352	0.636	0.364	0.570	0.429	0.506	0.404	10	30
Red	0.648	0.351	0.735	0.265	0.629	0.281	0.565	0.346	2.5	15
FI Yellow Green	0.387	0.610	0.369	0.546	0.428	0.496	0.460	0.540	60	---

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

**Table 3, Color Specification Limits (Nighttime)**

Color	Chromaticity Coordinates‡							
	1		2		3		4	
	x	y	x	y	x	y	x	y
White	0.475	0.452	0.360	0.415	0.392	0.370	0.515	0.409
Yellow	0.513	0.487	0.500	0.470	0.545	0.425	0.572	0.425
Orange	0.595	0.405	0.565	0.405	0.613	0.355	0.643	0.355
Red	0.650	0.348	0.620	0.348	0.712	0.255	0.735	0.265
FI Yellow Green	0.480	0.520	0.473	0.490	0.523	0.523	0.440	0.449

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

## 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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reflective-americas@orafol.com – www.orafolamericas.com