

AURA[®] 191 High Intensity Prismatic Grade Sheeting

Product Code: 0191

Product Data Bulletin

Product Overview

Aura Optical Systems' AURA[®] 191 High Intensity Prismatic Grade Sheeting is a microprismatic retroreflective sheeting with up to 5-years durability for construction work zone signing, traffic signing, delineators, and similar applications. Meets the color and reflectivity requirements of ASTM D-4956 Type III, EN-12899 Class RA2, and many other industry High Intensity Prismatic specifications.

Key Features

- Metalized, single-ply construction to prevent edge-lifting and eliminate water ingress on cut letters or numbers.
- Microprismatic optical elements aligned in multiple directions for a more uniform reflective appearance across different rotations.
- Aggressive high-tack adhesive for bonding to many different sign substrates
- Excellent handling for easier sign fabrication due to the proprietary Hybrid Polymer™ technology† of the face film.

Physical Characteristics & Properties

Durability	Up to 5-years when properly installed. Vertical exposure only.
Retroreflective Elements	Microprisms, metalized with vacuum-deposited aluminum
Product Thickness	12 mils, excluding release liner
Release Liner	Poly Release Liner
Adhesive	Aggressive high-tack adhesive for bonding to aluminum and many plastic sign substrates††.
Application Temperature	15°C (60°F) minimum

† Patent pending.

†† Suitability of the product for a specific sign substrate should always be tested prior to sign fabrication. Aura Optical Systems offers a variety of testing services to assist with such testing.

Color Availability

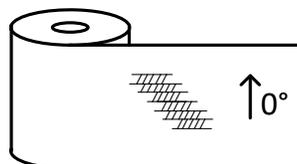
Product Code	Color
0191-00	White
0191-01	Yellow
0191-02	Red
0191-04	Orange
0191-05	Blue
0191-07	Green

Retroreflection

Minimum Coefficient of Retroreflection when Measured per ASTM E-810. Average of 0° and 90° Rotations. (cd/lx/m²)

Color	Observation Angle	Entrance Angle	
		-4° / 5°	30°
White	0.2°	360	170
	0.33°	180	100
	0.5°	95	65
Yellow	0.2°	270	135
	0.33°	120	70
	0.5°	62	35
Red	0.2°	65	30
	0.33°	25	14
	0.5°	15	10
Orange	0.2°	145	68
	0.33°	65	40
	0.5°	30	25
Blue	0.2°	30	14
	0.33°	14	8
	0.5°	7.5	5
Green	0.2°	50	25
	0.33°	21	12
	0.5°	15	10

As shown in the diagram below, for maximum levels of retroreflection, AURA[®] 191 should be oriented at the 0° rotation with the parallelogram pattern tilting towards the right.



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Daytime Color

The daytime color of AURA® 191 sheeting will fall within the color boundaries identified below by four pairs of chromaticity coordinates (CIE 1931 Standard Colorimetric System) when measured with Standard Illuminant D65 using a 0/45 (45/0) geometry instrument.

Color Boundaries:

Color	1		2		3		4		Cap Y%	
	x	Y	x	y	x	y	x	y	Min	Max
White	.303	.300	.368	.366	.340	.393	.274	.329	27	--
Yellow	.498	.412	.557	.442	.479	.520	.438	.472	16	45
Red	.648	.351	.735	.265	.629	.281	.565	.346	3.0	12
Orange	.558	.352	.636	.364	.570	.429	.506	.404	10	30
Blue	.140	.035	.244	.210	.190	.255	.065	.216	1.0	10
Green	.026	.399	.166	.364	.286	.446	.207	.771	3.0	9.0

Application Guidelines

AURA® 191 should be conditioned above 15°C (60°F) for at least 24-hours prior to application. Application should occur using a squeeze roll applicator or by hand using a firm rubber roller or plastic squeegee. Substrates should be cleaned prior to application. Wipe surfaces with rubbing alcohol (or similar solvent cleaner) and allow the surface to completely dry prior to application. Wet application method is NOT recommended.

For application to plastic substrates, especially low surface energy plastics, it is important to flame treat (or otherwise surface treat) the plastic substrate prior to application. Although AURA® 191 is supplied with an aggressive high-tack adhesive suitable for many plastics, it should be noted that all plastics are different. Many plastics, including fiberglass laminates, may contain ingredients or components that may migrate to the surface and adversely affect the adhesion or performance of the reflective sheeting. Similarly, the adhesive of AURA® 191 contains components that could potentially migrate into the plastic substrate. The user should always test the performance of AURA® 191 on their specific substrate.

Storage

Store in a cool, dry area. Use within 1-year of receipt of the product.

Warranty Information

The information, technical data, and statements made herein are believed to be reliable, but the accuracy or completeness thereof is not guaranteed and should not be construed as a warranty or representation for which Aura Optical Systems assumes legal responsibility. All Aura Optical Systems products are sold with the understanding that the Purchaser has independently determined the suitability of such products for its purposes.

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