

AURA[®] 103 Engineer Grade

Product Code: 0103

Product Data Bulletin

Product Overview

Aura Optical Systems' AURA[®] 103 Engineer Grade sheeting is an enclosed lens retroreflective sheeting intended for use on applications requiring durability of up to 3-years, including work zone signing and vehicle markings. It is supplied with a permanent pressure-sensitive adhesive and easy-release paper liner. It exhibits a very good bond to the most common substrates including aluminum and painted steel and can be printed with many different ink systems.

Physical Characteristics & Properties

Durability	3-years, when properly converted and installed in vertical position
Retroreflective Elements	Glass beads (Enclosed lens)
Film Thickness	150µm (6 mils) (excluding release liner)
Face Film	Acrylic
Adhesive	50µm (2 mils) Permanent pressure-sensitive adhesive
Release Liner	Poly-coated paper liner
Application Surface	Flat surfaces only such as aluminum. Not recommended for unpainted stainless steel.
Application Temperature	15°C (60°F) minimum

Color Availability

Product Code	Color
0103-00	White
0103-01	Yellow
0103-02	Red
0103-05	Blue
0103-07	Green

Other colors available upon request.

Retroreflection

Coefficient of Retroreflection (cd/lx/m²)

Color	Observation Angle	Entrance Angle (-4° / 5°)	
		Typical	Minimum
White	0.2°	90	70
	0.33°	65	50
Yellow	0.2°	65	50
	0.33°	50	35
Red	0.2°	20	15
	0.33°	14	10
Blue	0.2°	6	4
	0.33°	4	2
Green	0.2°	12	9
	0.33°	9	7

Application & Conversion

AURA[®] 103 Engineer Grade can be screen printed with a wide variety of UV-ink, solvent-based, and other screen inks. Acrylic-based or vinyl-based solvent inks are most suitable. Compatibility and adhesion characteristics of an ink should always be tested through a test print.

Sheeting 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.

AURA[®] 103 Engineer Grade can be computer sign cut using a variety of different industry plotters.



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Daytime Color

The color of the sheeting shall fall within the 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	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	15	45
Red	.648	.351	.735	.265	.629	.281	.565	.346	2.5	12
Blue	.140	.035	.244	.210	.190	.255	.065	.216	1.0	10
Green	.026	.399	.166	.364	.286	.446	.207	.771	3.0	12

Watermark

Aura Optical Systems' AURA® 103 Engineer Grade can be supplied with a watermark or security marking as required to meet various government specifications. Minimum volume requirements may apply.

Roll Sizes

Available in 45.7 meter (50 yard) rolls in different widths up to 1240mm (48 inches).

Storage

Store in a cool, dry area. Use within 1-year of receipt of the product. Store rolls in original shipping carton or suspend horizontally from a rod through the core.

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.

*The following is made in lieu of all other express or implied warranties. **No implied warranty of merchantability or fitness for a particular purpose is made.*** Aura Optical Systems products are warranted to be free from defects in material or workmanship for a period of one year from date of shipment if the product is properly stored and/or applied. Aura Optical Systems' sole obligation shall be to replace such quantity of product proven to be defective. Aura Optical Systems shall not be liable for any injury, loss or damage, direct or consequential, whether foreseeable or not, arising out of the use or of the inability to use the product.



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