

# AURA<sup>®</sup> 124 AXE<sup>™</sup> Digital Engineer Grade Reflective Vinyl

Product Code: 0124-AXE Product Data Bulletin

## Product Overview

Aura Optical Systems' AURA<sup>®</sup> 124 AXE<sup>™</sup> Digital Engineer Grade Reflective Vinyl is an enclosed lens retroreflective vinyl with an air-egress liner. The product is intended for use on graphics and signing applications. With a durability of up to 7-years, AURA<sup>®</sup> 124 AXE<sup>™</sup> can be used for advertising graphics, vehicle markings, and many other applications. AURA<sup>®</sup> 124 AXE<sup>™</sup> features a cast vinyl face film, which allows for exceptional printing on a variety of digital systems, including eco-solvent, UV, and latex printers. It is supplied with a permanent pressure-sensitive adhesive to bond with many substrates, including painted steel, aluminum, and many automotive paints. The product incorporates an air-egress release liner with a series of micro-channels to allow for bubble-free application. Meets the performance requirements of ASTM D-4956 Type I, EN-12899 Class RA1, and other industry specifications.

## Key Features

- AXE<sup>™</sup> air-egress liner to assist with bubble-free application
- Similar daytime and nighttime appearance
- Retains retroreflectivity when wet
- Digitally printable on a variety of printer systems<sup>†</sup>
- Computer sign cuttable

## Color Availability

Product Code	Color
0124-AXE-00	White

Other colors available upon request

## Retroreflection

Typical Coefficient of Retroreflection at 0.2° Observation Angle / -4° Entrance Angle.

Color	R <sub>A</sub> (cd/lx/m <sup>2</sup> )
White	85

## Physical Characteristics & Properties

Durability	Up to 7-years, when properly converted and installed in a vertical position. Horizontal use may decrease the durability of the product and is not recommended.
Printability <sup>†</sup>	Digital printing, including latex, UV, and eco-solvent printers. Screen printing with many solvent-based or UV screen inks.
Retroreflective Elements	Glass beads (Enclosed lens)
Film Thickness	160µm (approximately 6.5 mils) (excluding release liner)
Face Film	Cast vinyl
Adhesive	50µm (2 mils) Permanent pressure-sensitive adhesive
Release Liner	AXE <sup>™</sup> Release Liner with microchannels embossed into the liner for air egress features
Application Surface <sup>††</sup>	Flat surfaces or gentle curves. The adhesive is designed for aluminum and many painted surfaces. Not recommended for unpainted stainless steel.
Application Temperature	15°C (60°F) minimum

<sup>†</sup> Compatibility and adhesion characteristics of a given ink / printer should always be confirmed through a test print.

<sup>††</sup> Suitability of the product for an application surface should always be tested by the user prior to application.

## Application & Conversion

AURA<sup>®</sup> 124 AXE<sup>™</sup> Digital Engineer Grade can be printed with a wide variety of digital ink systems, including eco-solvent, UV, and latex printers. AURA<sup>®</sup> 124 AXE<sup>™</sup> can also be screen printed with both solvent-based inks as well as many UV inks. Compatibility and adhesion characteristics of an ink should always be tested through a test print. To maintain high levels of retroreflection, transparent inks should be utilized.



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## Application & Conversion (continued)

Sheeting should be conditioned above 15°C (65°F) for at least 24-hours prior to printing, lamination, or application.

If over-laminating to protect a digital print, a premium cast gloss over-laminate film is recommended. Do not use a matte over-laminate, as this will significantly reduce reflectivity. Lamination should occur only after the printed graphics are completely dry. It is best to allow the graphics to dry overnight. Use only cold lamination methods. Ensure lamination is wrinkle free and that the over-laminate film enters the nip without any wrinkles. If wrinkles occur, the nip pressure setting may be too high. Avoid high tensions on either the printed reflective film or the over-laminate film. After lamination, the material should lay flat without any curling. If curling is present, the tensions or nip pressures may be too high.

Application surfaces must be clean and free of dust, rust, oils, grease, waxes, or other contaminants. Application should occur using a squeeze roll applicator or by hand using a firm rubber roller or plastic squeegee. Apply firm pressure during application to bond the adhesive to the substrate. Always apply pressure from the center of the graphic towards the edges to minimize air entrapment or bubbles. Use a dry application method. Do not use detergent, water, or any commercial application liquids to position the reflective sheeting. A heat gun may assist conformability of the film around curved surfaces.

AURA® 124 AXE™ is intended for use on flat sign surfaces or gentle curved surfaces. Slight tenting may occur around rivets, sharp ridges, or some complex curves.

If applied to a vehicle, please note that some automotive paints may continue to out-gas for some time, which could disrupt application of the sheeting. Be sure painted surfaces are fully cured prior to application of the product. Do not apply over freshly waxed surfaces.

The suitability of the product on any application surface should always be tested by the user prior to application.

AURA® 124 AXE™ Digital Engineer Grade can be computer sign cut using a variety of different industry plotters. A 60 degree blade is recommended for most plotters.

## Roll Sizes

AURA® 124 AXE™ is available in 45.7 meter (50 yard) rolls in 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

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