

Specialty Computer Vinyl

Reflective Series

Re-Issued: 01/06/2015

Product Description:

Universal Products, Inc. Engineering Grade Reflective vinyl films are high quality reflective materials that meet or exceed the applicable requirements of ASTM D 4956 Type III, often referred to as "high intensity retro-reflective sheeting". Typical applications for this material are permanent highway signage, construction zone devices and delineators. Reflective Series films are specifically designed for use on computer sign cutting equipment and provide excellent cutting, weeding, transferring and conforming characteristics.

Construction:

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|----------------|--|
| Film: | 5.5 mil (140µm) high-gloss premium retro-reflective vinyl film |
| Adhesive: | Permanent acrylic, pressure-sensitive |
| Release Liner: | 78# White Kraft |

Physical Properties:

| | | | |
|--------------------------------------|--|--------------------|--------------------|
| Outdoor Durability: | 5-7 years - moderate climate, unprinted film, vertically applied. | | |
| Ambient Air Application Temperature: | +50°F (10° C) through 100°F (39° C) | | |
| Application Surface: | Flat, flat with rivets - high and moderate energy substrates and coatings. (Not recommended for use on unpainted Stainless Steel applications.) | | |
| Service Temperature Range: | -40°F to +180°F (-40° C to +82° C) (Reasonable range of temperatures which would be expected under normal environmental time and temperature conditions.) | | |
| Typical Film Caliper: | 6.5 mils (165 µm) with adhesive.. | | |
| Chemical Resistance: | Resistant to mild acids, alkalis and salt solutions | | |
| Typical Adhesion Values: | 180° Peels | | |
| ASTM 1000 (lb./inch) | Substrate | 10 min. | 24 hrs |
| | Stainless Steel | 3.0 lbs. (525 N/m) | 4.0 lbs. (700 N/m) |
| Shelf Life: | One year when stored at temperatures under 73°F (23° C) and 50% RH | | |
| Dimensional Stability: | Less than 0.030" (0.5mm). Determined by measuring shrinkage of film applied to 3" X 6" aluminum test panel followed by 48 hours of heat aging at 160°F (67° C) | | |
| 60° Gloss: | ~80 | | |
| Elongation: | 10% minimum | | |
| Printing Recommendations: | Thermal Transfer Printing Screen Printing using inks specifically engineered for use on Reflective PVC films. Digital Printing (Material compatible with most solvent printers, including eco-solvent.) <i>Film should be trialed to confirm printability prior to running job.</i> | | |

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Use Guidelines:

- Reflective Series films should only be applied to clean, dry surfaces.
- Use of the "wet" application method is not recommended with Reflective Series films. ***Use of the "wet" application method will void all warranty considerations.***
- Always pre-test your specific substrate prior to actual application.
- Do not allow the adhesive to freeze for the first 48 hours following initial application.
- Reflective Series films are not repositionable products. Attempts to apply and then lift and reposition the film during application can result in film damage.
- Reflective Series films are not impact-resistant products. Application to areas that receive significant instances of repeated impact or abrasion (such as bumpers and rocker panels) should be avoided.
- Attempts to apply the product to surfaces below 50°F may result in lifting the graphic during premask removal activities.
- Reflective Series films are not recommended for use on textured surfaces, complex curvatures or low surface energy substrates or coatings such as powdercoat paint and low energy plastics.
- A reduction in long-term durability should be expected if the product is applied in a horizontal position.
- Long-term durability will be reduced in locations that experience high levels of UV light exposure (Florida, South and West Texas, New Mexico, Arizona, Nevada, Utah, California and locations with elevations above 3000').
- When spray washing, high-pressure nozzles should be held no closer than 24" from applied graphics.
- High-pressure cleaning sprays with water pressures above 1200 psi and/or water temperatures above 120F should not be used on Reflective Series films.

The information provided herein is obtained using standard industry laboratory test methods, which are believed to be reliable. The listed average values are intended only as a source of information and are not intended for use as a specification, guarantee or warranty. The data presented is accurate at the time of publication, but subject to change without notice as product is improved. All products are sold with the understanding that the purchaser has independently determined the suitability of such products for its purposes.