

# ORALITE® Series 5600 Fleet Engineering Grade Reflective Film

## Description

5-mil, cast PVC reflective film that is weather resistant and self-adhesive. Series 5600 is flexible with excellent corrosion and solvent resistance. Meets ASTM D 4956 specifications for Type I, Class 1 retroreflective sheeting.

Available in 14 high impact colors.

## Release Liner

89# PE-coated silicone paper

## Adhesive

Clear, solvent-based, permanent adhesive (removable with heat)

## Applications

Specially developed for vehicle graphics applications to produce reflective lettering, markings and decorations. Series 5600 is suitable for use on cutting plotters. Provides flexibility for application over corrugations and rivets.

## Technical Data

|  |   |
|--|---|
| <b>Thickness</b> (without liner and adhesive)  | 5 mil   |
| <b>Temperature Resistance</b>  | Adhered to aluminum, -58°F to +203°F, no variation  |
| <b>Suitable fire extinguishing media</b><br><b>Fire Rating</b>                                 | water spray mist, dry extinguishing agent, carbon dioxide, foam<br>ASTM E 84-07 Class "A" |
| <b>Adhesive Power</b> (FINAT TM-1, after 24 h, average)  | Adhered to stainless steel: 3.4 lb/in (tear of film)                                      |
| <b>Tensile Strength</b> (DIN EN ISO 527)   | Along: Min. 10 N/mm <sup>2</sup><br>Across: Min. 10 N/mm <sup>2</sup>                     |
| <b>Elongation at Break</b> (DIN EN ISO 527)  | Along: Min. 100%<br>Across: Min. 100%   |
| <b>Seawaterability</b> (DIN 50 021)  | Adhered to aluminum, after 100h/73°F, no variation  |
| <b>Shelf Life</b> (68°F/50% relative humidity)   | 2 years   |
| <b>Minimum Life Expectancy</b> (based on accepted application procedures on vertical surfaces) | 7 years (unprinted)   |
| <b>Minimum Application Temperature</b>   | 59°F  |
| <b>Available Lengths</b><br><b>Available Widths</b> (inches)                                   | 150' (50-yard), 30' (10-yard)<br>15 (punched), 24, 30, 48, (54, 60, white only)           |
| <b>Recommended Laminates</b>   | ORAGUARD® Series 293  |
| <b>Recommended Application Tapes</b>   | ORATAPE® HT55, MT95, MT72   |
| <b>Print Compatibility</b> (white only)  | Latex, Solvent, Eco-Solvent, Thermal & Screen Printing                                    |

**ORACAL® recommends that printed film be allowed to dry for at least 24 hours at 70°F (48-72 preferred) before applying a laminate.**

## Attention

Recycling Recommendation: Waste class similar to household waste, is to be recycled according to the local regulations.

Surfaces to which the material will be applied must be cleaned thoroughly of dust, grease or any contaminants. Freshly lacquered or painted surfaces should be allowed to stand for at least three weeks after complete curing. The compatibility of selected lacquers and paints should be tested by the end-user prior to use.

The statements in this information sheet are based upon our knowledge and practical experience. This data is intended only as a source of information and is given without any guarantee and does not constitute a warranty. Due to the wide variety of possible uses and applications, customers should independently determine the suitability of this material for their specific purpose, prior to use.



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## Technical Data

ORALITE® Series 5600 meets the following ASTM D 4956 specifications for Type I, Class 1 retroreflective sheeting.

| Observation Angle | Minimum coefficient of retroreflection<br>(R) cd/ft <sup>2</sup> (cd • lx <sup>-1</sup> • m <sup>-2</sup> ) |     |      |     | Daytime Luminance Factor (Y%) |         |
|-------------------|---|-----|------|-----|-------------------------------|---------|
|                   | 0.2°  |     | 0.5° |     | Minimum                       | Maximum |
|                   | -4°   | 30° | -4°  | 30° |                               |         |
| white 010         | 70  | 30  | 30   | 15  | 27                            |         |
| yellow 020        | 50  | 22  | 25   | 13  | 15                            | 45      |
| orange 035        | 25  | 7   | 13   | 4   | 10                            | 30      |
| red 030           | 14  | 6   | 7.5  | 3   | 2.5                           | 15      |
| green 060         | 9   | 3.5 | 4.5  | 2.2 | 3                             | 12      |
| blue 050          | 4   | 1.7 | 2    | 0.8 | 1                             | 10      |
| brown 080         | 1   | 0.3 | 0.3  | 0.2 | 1                             | 9       |

### Color Specification Limits (Daytime)\*

|            | 1     |       | 2     |       | 3     |       | 4     |       |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|
|            | x     | y     | x     | y     | x     | y     | x     | y     |
| white 010  | 0.303 | 0.300 | 0.368 | 0.366 | 0.340 | 0.393 | 0.274 | 0.329 |
| yellow 020 | 0.498 | 0.412 | 0.557 | 0.442 | 0.479 | 0.520 | 0.438 | 0.472 |
| orange 035 | 0.558 | 0.352 | 0.636 | 0.364 | 0.570 | 0.429 | 0.506 | 0.404 |
| red 030    | 0.648 | 0.351 | 0.735 | 0.265 | 0.629 | 0.281 | 0.565 | 0.346 |
| green 060  | 0.026 | 0.399 | 0.166 | 0.364 | 0.286 | 0.446 | 0.207 | 0.771 |
| blue 050   | 0.140 | 0.035 | 0.244 | 0.210 | 0.190 | 0.255 | 0.065 | 0.216 |
| brown 080  | 0.430 | 0.340 | 0.610 | 0.390 | 0.550 | 0.450 | 0.430 | 0.390 |

### Color Specification Limits (Nighttime)\*

|            | 1              |       | 2     |       | 3     |       | 4     |       |
|------------|----------------|-------|-------|-------|-------|-------|-------|-------|
|            | x              | y     | x     | y     | x     | y     | x     | y     |
| white 010  | no requirement |       |       |       |       |       |       |       |
| yellow 020 | 0.513          | 0.487 | 0.500 | 0.470 | 0.545 | 0.425 | 0.572 | 0.425 |
| orange 035 | 0.595          | 0.405 | 0.565 | 0.405 | 0.613 | 0.355 | 0.643 | 0.355 |
| red 030    | 0.650          | 0.348 | 0.620 | 0.348 | 0.712 | 0.255 | 0.735 | 0.265 |
| green 060  | 0.007          | 0.570 | 0.200 | 0.500 | 0.322 | 0.590 | 0.193 | 0.782 |
| blue 050   | 0.033          | 0.370 | 0.180 | 0.370 | 0.230 | 0.240 | 0.091 | 0.133 |
| brown 080  | 0.595          | 0.405 | 0.540 | 0.405 | 0.570 | 0.365 | 0.643 | 0.355 |

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

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