

ORACAL® 651™ INTERMEDIATE CALENDERED PLOTTER FILM

Technical Datasheet
05/2026
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Description

ORACAL® 651™ stands out as the industry leader in calendered plotter film, offering an impressive selection of 82 colors in both glossy and luxurious matte finishes. Its specially formulated adhesive and film combination ensures ease of weeding and exceptional dimensional stability, rivaling even PVC-cast plotter films.

This makes it an excellent choice for various applications including flat automotive surfaces, general signage, and window graphics, providing great value for users.

For those seeking additional color options, enhanced conformability, or longer-term durability, ORACAL® offers alternatives such as the ORACAL® 751 High Performance Cast PVC films with 84 colors or the ORACAL® Series 951 Premium Cast PVC films with an extensive palette of 154 colors. These options provide greater versatility and performance for projects requiring specific characteristics like durability or conformability to complex surfaces.

Release Liner

84# custom silicone-coated paper with special release characteristics that provide excellent weeding and release values. Customized blue silicone paper liner for matte and gloss white face film provides superior contrast for weeding.

Adhesive

Clear, solvent-based, permanent

Film Construction

Medium-Term Calendered PVC Film (*Up to 6 years*)

Finish

All colors and metallics are available in a gloss finish. 18 select colors are available in both gloss and matte finish.

Color

Available in 81 colors plus transparent, matte white, and matte black

Applications

- Flat, medium-term applications
 - Car, Truck, Van, & Trailer Graphics
 - Interior & Exterior General Signage
 - Architectural & Automotive Window Graphics
 - Point of Purchase Graphics
 - Craft & Home Décor Graphics

Compatible Application Tapes

- ORATAPE® HT55 (*paper*)
- ORATAPE® MT95 (*clear conformable*)

Outdoor Durability

Vertical Exposure, Climate Zone 1

- 6 years - colors/transparent
- 4 years - metallic
- 3 years – brilliant blue (086)



ORAFOL Americas – GA
1100 Oracal Parkway
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Phone: 888.672.2251

ORAFOL Americas – CT
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Avon, CT 06001
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ORAFOL Canada
2831 Bristol Circle
Oakville, Ontario L6H
6X5
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Splice Free Guarantee

Our Splice Free Guarantee assures you that every roll of ORAGUARD® over-laminate is free from splices. If you identify a verifiable splice, we will promptly replace the roll at no cost and provide you with \$500 as a token of our commitment to your satisfaction and uninterrupted graphic production experience.

Technical Data

Thickness (without liner and adhesive)	2.5-mil
Dimensional Stability (FINAT TM-14)	Adhered to steel, no shrinkage in cross direction; In length, <.016"
Temperature Resistance	Adhered to aluminum, -40°F to +176°F, no variation
Fire Behavior (DIN 75200) Fire Rating	Adhered to steel, self-extinguishing ASTM E 84-07 Class "A"
Adhesive Power (FINAT TM-1, after 24 h, average)	Adhered to stainless steel: 4.1 lb/in
Tensile Strength (DIN EN ISO 527)	Along: Min. 19 MPa Across: Min. 19 MPa
Elongation at Break (DIN EN ISO 527)	Along: Min. 130% Across: Min. 150%
Seawaterability (DIN 50 021)	Adhered to aluminum, after 100h/73°F, no variation
Shelf Life (68°F/50% relative humidity)	2 years
Minimum Life Expectancy (based on accepted application procedures on vertical surfaces)	6 years - colors/transparent 4 years - metallic 3 years – brilliant blue
Minimum Application Temperature	46°F
Available Lengths Available Widths	150' (50-yard) and 30' (10-yard) Available Gloss Widths (including matte white and matte black) 12", 15" (punched), 24", 30", 48", 36"* and 60"* *36" available in transparent, black, and white. 60" available upon special request. Contact Customer Service for expected lead time. Available Matte Widths (including matte white and matte black) 12", 24", and 48"
Compatible Application Tapes	ORATAPE® Series HT55, MT95, MT80P



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Print Compatibility

Thermal Transfer (gloss finish only)

Note

Surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination which could affect the adhesion of the material. Freshly lacquered or painted surfaces should be completely cured. The compatibility of selected lacquers and paints should be tested by the user, prior to application of the material. Films with structured surface are naturally more sensitive than the unstructured. Accordingly, these films are to be treated carefully both in processing and in cleaning. Impurities affect the appearance of structured films and require more frequent cleaning. Furthermore the application information published by ORAFOL is to be considered. The batch traceability according to ISO 9001 is possible on the basis of the roll number.

IMPORTANT NOTICE

All ORACAL® products are subject to careful quality control throughout the manufacturing process and are warranted to be of merchantable quality and free from manufacturing defects. Published information concerning ORACAL® products is based upon research which the Company believes to be reliable although such information does not constitute a warranty. Because of the variety of uses of ORACAL® products and the continuing development of new applications, the purchaser should carefully consider the suitability and performance of the product for each intended use, and the purchaser shall assume all risks regarding such use.

All specifications are subject to change without prior notice.

WARNING – This product may expose you to chemicals which are known in the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to – P65Warnings.ca.gov



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