

# ORAGUARD® 289GF PREMIUM PVC-FREE LAMINATING FILM

Technical Datasheet  
08/2021  
Page 1 of 2

## Description

2-mil, premium high-performance polyurethane (PU) (PVC-Free) over-laminate, optically clear transparent high-gloss surface. Highest level of UV resistance. Won't yellow or crack, making it ideal for extremely durable, rugged, vehicle wrap and graphic applications in tropical, arid, extreme cold, or industrial environments.

## Release Liner

1.4-mil silicone-coated polyester film

## Adhesive

Clear, solvent-based, permanent

## Area of Use

For protection of digitally printed large format images in indoor and outdoor graphic applications. Recommended for use with PVC-free digital printing film ORAJET® 3981RA + ProSlide® Premium Eco Digital Print with RapidAir® technology.

## Technical Data

<b>Thickness</b> (without liner and adhesive)	2-mil
<b>Dimensional Stability</b> (FINT TM 14)	Adhered to steel, shrinkage 0.003 max.
<b>Temperature Resistance</b>	Adhered to aluminum, -58°F to +212°F, no variation
<b>Adhesive Power</b> (FINAT TM-1, after 24 h, average)	Adhered to stainless steel: 2.74 lb/in
<b>Tensile Strength</b> (DIN EN ISO 527)	Along: Min. 25 MPa Across: Min. 25 MPa
<b>Elongation at Break</b> (DIN EN ISO 527)	Along: Min. 150% Across: Min. 150%
<b>Seawaterability</b> (DIN 50 021)	Adhered to aluminum, after 100h/73°F, no variation
<b>Resistance to Solvents and Chemicals</b>	At room temperature, 72h after adhesion to aluminum, short-term resistant to most oils and greases, fuels, aliphatic solvents, weak acids, salts and alkalis
<b>Shelf Life</b> (68°F/50% relative humidity)	2 years
<b>Minimum Life Expectancy</b> (based on accepted application procedures on vertical surfaces, normal climate of Central Europe)	10 years
<b>Minimum Application Temperature</b>	> +46°F
<b>Available Lengths</b> <b>Available Widths</b> (in inches)	150' (50-yard), 75' (25-yard), 30' (10-yard) 30, 54, 60
<b>Recommended to be used in combination with</b>	ORAJET® Series 3981RA, 3951RA, 3751RA, 5600, 5650RA, 5600RA, 3850, 3981GPS, 3951GPS, 3751GPS
<b>UV Protection Extension Factor</b>	+ 5 years

For best results, utilize ORAFOL ICC profiles available at [www.orafol.com](http://www.orafol.com) and allow solvent-based inks to dry for at least 24 hours (48-72 hours preferred) at 70°F before cutting the graphic to the ink or applying a laminate.

Isopropyl Alcohol – May haze when wiped down with Isopropyl Alcohol. Instead, simply wipe/clean the surface with a mild detergent and water mixture when necessary.



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Page 2 of 2

**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 ORAGUARD® 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 ORAGUARD® 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 ORAGUARD® 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 contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.



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