

**TECHNICAL
DATA
SHEET**
GF 231 AUTOMARK™
**2.4 MIL GLOSS UV WRAP LAMINATE
CLEAR PERMANENT ADHESIVE**

GF 231 is a Premium 2.4 mil calendered gloss clear laminate with a clear permanent acrylic adhesive on a 53# PE coated kraft liner. This laminate offers protection from ultra violet radiation, moisture and other environmental exposures. It can be laminated by using a cold laminating process without the addition of heat and is intended to be paired with GF 230 AutoMark™ vinyl for wrap applications. GF 231 AutoMark™ Premium 2.4 mil calendered gloss laminate is specifically engineered for use in most vehicle wrap and decal applications.

PRODUCT NAME	231
FILM	
Film Type	Clear Polymeric Vinyl
Film Thickness (mils/μm)	2.4 / 61 (+/- 10%)
Film Weight (gsm)	75
Gloss (60°)	≥ 70
Opacity (%)	N/A
Tensile Strength (lbs/in)	MD ≥ 4000 / CD ≥ 3500
Elongation (%)	MD ≥ 225 / CD ≥ 300
Dimensional Stability (FTM 14)	MD ≤ 0.50 mm / CD ≤ 0.20 mm
ADHESIVE	
Adhesive Type	Solvent Acrylic
Adhesive Thickness (mils/μm)	0.8-1.0 / 20-25
Adhesive Color	Clear
Peel Strength on Stainless Steel (lbs/in) / (N/25mm) 15 min	2.5 / 11
Peel Strength on Stainless Steel (lbs/in) / (N/25mm) 24 hrs	3.8 / 17
LINER	
Liner Weight (#/gsm)	53 / 86
Liner Type	White PE-Coated 1 side Kraft
Liner Thickness (#/gsm)	3.5 / 89
Release Force @ 300" / min (g/2")	15-30
PERFORMANCE GUIDANCE	
Application Temperature	≥ +40 °F
Service Temperature	-40 °F to 180 °F
Shelf Life	1 year
Storage Temp / Rel. Humidity	70 °F / 50%
Outdoor Durability	up to 7 years
CERTIFICATIONS & RATINGS	
Flammability (when used with GF 230 AutoMark™)	ASTM E84 Class 1 or A (Rating Standard Test Method for Surface Burning Characteristics of Building Materials)

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PRODUCT SNAPSHOT	APPLICATIONS	INK TYPE
<p>APPLICATION</p> <ul style="list-style-type: none"> <input type="radio"/> WET APPLY <input checked="" type="radio"/> DRY APPLY <input checked="" type="radio"/> LAMINATING <input checked="" type="radio"/> DIE CUTTABLE <input type="radio"/> HOT STAMP <input type="radio"/> THERMAL DIE <input checked="" type="radio"/> FLATBED CUTTABLE 	<ul style="list-style-type: none"> <input type="radio"/> POP/RETAIL <input type="radio"/> WALL <input checked="" type="radio"/> WRAP <input type="radio"/> WINDOW <input type="radio"/> FLOOR <input checked="" type="radio"/> FLEET <input checked="" type="radio"/> GENERAL SIGNAGE <input checked="" type="radio"/> OUTDOOR (LONG TERM) 	<ul style="list-style-type: none"> <input type="radio"/> SOLVENT <input type="radio"/> ECO-SOLVENT <input type="radio"/> LATEX <input type="radio"/> UV CURABLE <input type="radio"/> SCREEN <input type="radio"/> OFFSET (UV CURABLE) <input type="radio"/> OFFSET (CONVENTIONAL)
<p>SUBSTRATES</p> <ul style="list-style-type: none"> <input type="radio"/> OEM PAINTED METAL <input type="radio"/> PAINTED ALUMINUM <input type="radio"/> STAINLESS STEEL <input checked="" type="radio"/> PRINTED GRAPHICS 		

FAQS	
What are the intended applications for GF 231?	This laminate is best suited for long-term outdoor graphics. GF 231 AutoMark™ Wrap Laminate was created to be paired with GF 230 AutoMark™ Wrap Vinyl to create long lasting outdoor graphics for vehicle wrap and decal applications.
Can I use GF 231 AutoMark™ laminate with other print vinyls?	GF 231 will work well with most base vinyls, however for optimal success you will want to pair similar products together.
Can I use a laminate other than GF 231 AutoMark™ Wrap Laminate with GF 230 AutoMark™ Wrap Vinyl?	Although other laminates may work, the warranty outlined by General Formulations is only in effect if the warranted AutoMark™ products are used. The AutoMark™ series of laminates are customize for this specific application (2.4 mil polymeric vinyls ideal for simple curves) We recommend filling out the application checklist on our website to ensure a successful installation. Videos are available on YouTube as well that outline specific techniques.