

**TECHNICAL
DATA
SHEET**
GF 209AE METROMARK®
**3.5 MIL HIGH OPACITY MATTE WHITE TRANSIT VINYL
CLEAR REMOVABLE ADHESIVE**

GF 209AE MetroMark® is a 3.5 mil matte white polymeric flexible high opacity vinyl film coated with a removable acrylic pressure-sensitive adhesive on a 90# air-egress (AE) layflat liner. This film is designed to accept latex, solvent-based inkjet and UV curable inks common to wide format digital printing systems and can be sheeted for screen printing. The 90# AE liner offers excellent product layflat in a variety of ambient conditions, along with ease of application of large format graphics. GF 209AE is designed for temporary applications including product markings, point-of-purchase decals, transportation advertising systems, and tri-vision indoor/outdoor billboard displays. GF 209AE will conform to simple curves and has excellent hiding characteristics for multi-layered graphics.

PRODUCT NAME	209AE
FILM	
Film Type	White Polymeric Vinyl
Film Thickness (mils/ μ m)	3.5 / 89 (+/- 10%)
Film Weight (gsm)	130
Gloss (60°)	\leq 20
Opacity (%)	99
Tensile Strength (lbs/in ²)	MD \geq 3500 / CD \geq 2500
Elongation (%)	MD \geq 90 / CD \geq 200
Dimensional Stability (FTM 14)	MD \leq 0.50 mm / CD \leq 0.40 mm
ADHESIVE	
Adhesive Type	Emulsion Acrylic
Adhesive Thickness (mils/ μ m)	0.8-1.0 / 20-25
Adhesive Color	Clear
Peel Strength on Stainless Steel (lbs/in) / (N/25mm) 15 min	1.0-1.5 / 4.4-6.6
Peel Strength on Stainless Steel (lbs/in) / (N/25mm) 24 hrs	1.3-1.8 / 5.7-7.9
LINER	
Liner Weight (#/gsm)	90 / 145
Liner Type	White 2-Sided PE Coated Kraft Air Egress
Liner Thickness (mils/ μ m)	7.0 / 180
Release Force @ 300" / min (g/2")	30-50
PERFORMANCE GUIDANCE	
Application Temperature	\geq +20 °F ❄️ (10° F cold weather tested for glass applications only)
Service Temperature	-40 °F to 180 °F
Shelf Life	1 year
Storage Temp / Rel. Humidity	70 °F / 50%
Outdoor Durability	5 years
Removability	1 year
CERTIFICATIONS & RATINGS	
Flammability	ASTM E84 Class 1 or A (Rating Standard Test Method for Surface Burning characteristics of Building Materials)

*All values provided are typical averages intended for guidance only and should not be interpreted as product specifications or warranties.

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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 type="radio"/> LAMINATING <input type="radio"/> MOUNTING <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 checked="" type="radio"/> POP/RETAIL <input checked="" type="radio"/> WALL <input checked="" type="radio"/> WRAP (SIMPLE CURVES) <input type="radio"/> WRAP (COMPLEX CURVES) <input checked="" type="radio"/> WINDOW <input type="radio"/> FLOOR <input type="radio"/> FLEET <input checked="" type="radio"/> TRANSIT <input checked="" type="radio"/> GENERAL SIGNAGE <input checked="" type="radio"/> OUTDOOR <input checked="" type="radio"/>  OUTDOOR (COLD TEMPS) This product has been tested for glass applications only at temperatures as low as 10° F. Laminating is recommended for films less than 6 mil thick to improve handling and ease of application. For best results at these low temperatures, the film must be applied dry. 	<ul style="list-style-type: none"> <input checked="" type="radio"/> SOLVENT <input checked="" type="radio"/> ECO-SOLVENT <input checked="" type="radio"/> LATEX <input checked="" type="radio"/> UV CURABLE <input checked="" type="radio"/> SCREEN <input checked="" type="radio"/> OFFSET (UV CURABLE) <input type="radio"/> OFFSET (CONVENTIONAL)
<p>SUBSTRATES/SURFACES</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> OEM PAINTED METAL <input checked="" type="radio"/> PAINTED ALUMINUM <input checked="" type="radio"/> STAINLESS STEEL <input checked="" type="radio"/> GLASS 		

FAQS	
GF 209AE MetroMark® Transit Approved?	Yes. MetroMark® is an approved and specified material for multiple transit-related applications including King/Queen/Tail bus advertisements, high opacity removable graphics, and layered poster graphics.
Can GF 209AE be used as a wrap film?	MetroMark® is conformable film that can go around simple curved surfaces. The adhesive system is strong enough to hold your graphic in place, but robust enough to remove cleanly.
Can you put GF 209AE over the top of existing graphics?	Yes. GF 209AE is a high opacity vinyl and can be layered on top of existing graphics. These films can be used for one, two and three sheet subway advertising posters, architectural signage, commercial-retail signage, industrial identification decals, safety decals, point-of-purchase graphics and other decals requiring extended life. Keep in mind, adhesive vinyl products can bond with other vinyl materials and might not allow MetroMark® to be removed cleanly from other graphics.
Should MetroMark® be laminated?	Although it is not necessary to laminate MetroMark®, you may choose to do so depending upon what type of abrasion and or cleaning detergents the graphics will encounter. GF 100 series overlaminates are recommended in those situations.
Is GF 209AE MetroMark® safe for all painted vehicle surfaces?	MetroMark® will not damage the painted surface on stable OEM or repainted motor coach surfaces. Note: Stable paint surface is defined as a positive paint bond between paint and paint receptive surface of at least 320 oz. per inch peel adhesion.