



Gerber High Performance Series 220 Premium Film

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DESCRIPTION

Gerber High Performance Series 220 is a high performance cast vinyl film made exclusively for Gerber by 3M™. Gerber High Performance Series 220 is a durable, dimensionally stable vinyl with a clear, pressure-sensitive adhesive designed to withstand a variety of severe weather and handling conditions. It is available in opaque gloss, matte, metallic, and Clear Enamel Receptive in both punched and unpunched formats. Series 220 comes on a paper liner.

15" Series 220 is an EDGE READY™ Material.

PRODUCT LINE

Property	Description
Film	2 mil cast vinyl
Thickness (film and adhesive)	2.5 to 3.5 mil (0.063 to 0.09mm)
Film Color	See Color Chart
Adhesive	Clear, pressure sensitive
Liner	78 pound, white Kraft liner
Application	For flat surfaces with and without rivets, or simple curved surfaces

substrates	
Application surfaces	Flexible signage, glass, metal, acrylic, polycarbonates, fiberglass, painted surfaces
Removability	Permanent

INTENDED APPLICATIONS

Series 220 is suitable for a wide range of commercial and industrial applications including vehicles, exterior and interior signage, window markings, display graphics, etc. It can be used on flat surfaces with and without rivets or simple curved surfaces. Series 220 has a clear adhesive and is therefore suitable for use as a cut vinyl in window/transparent substrate applications, as well as opaque applications.

PERFORMANCE LIFE (UNPRINTED)

The exterior performance life of Gerber High Performance Series 220 is based upon field experience and exposure tests conducted throughout the United States. When the graphics are processed and used according to Gerber recommendations, they should have the performance life shown in the charts that follow. The actual performance depends on the following conditions:

- Selection and preparation of substrate
- Application methods
- Exposure conditions
- Cleaning methods

	Years	
Vertical Exposure (Face of graphic is vertical 90° ± 10°.)	U.S. ^{1, 4}	S. W. ^{2, 4}
Signs Only Solid colors, except metallic colors and clear		
Unprinted, applied to first surface	7	5
Unprinted, applied to second surface	7	5
Vehicles Only Solid colors, except metallic colors and clear		
Unprinted, applied to first surface	8	5
Unprinted, applied to second surface	8	5
Signs and Vehicles Metallic colors and Clear		
Unprinted, applied to first surface	5	3
Unprinted, applied to second surface	5	3

Non-Vertical Exposure³ (Face of graphic is more than 10° from 90°) Solid colors only

Unprinted, applied to first surface

5

Not
Recommended

1 FOR EXTERIOR PERFORMANCE LIFE STATEMENTS OUTSIDE OF THE UNITED STATES, CONTACT GERBER SCIENTIFIC PRODUCTS, INC.

2 The United States Desert Southwest area includes Arizona, New Mexico, and the desert areas of California, Nevada, Utah, and Texas. A detailed map is available upon request.

3 Non-vertical applications can be used to identify commercial vehicles from the air. Non-vertical applications expose the film to the maximum effect from sunlight and the environment. There are foil and film restrictions for horizontal applications. The film may change color, lose gloss, and chalk. The following performance statements assume that only legibility is required.

4 Unprinted films 220-20, 220-163, 220-263, 220-273, and 220-286 may chalk with age (Matte White, Dark Magenta, Perfect Match Red, Process Magenta, and Jade Green). This is considered normal and acceptable wear.

SHELF LIFE AND STORAGE

Apply film within one year of receipt. Printed graphics should also be applied within one year. Film and printed graphics (with or without premask) should be kept in a clean area free from excessive moisture and direct sunlight. Maintain temperature at less than 100°F (38°C).

Use a paper interleaf between layers of stacked or rolled printed materials. Do not stack printed graphics face to face.

MAINTENANCE

To clean printed graphics, use a mild, non-abrasive soap with a soft cloth or sponge. Avoid using alcohol-based cleansers or soaps containing grit or abrasives. Automated vehicle washing systems that use rotary cleaning brushes should also be avoided.

PRINTING

Use Gerber Series 220 settings when printing with the GERBER EDGE®, GERBER EDGE 2® or GERBER EDGE FX.

GerberColor™ Finishing (GCF), GerberColor Spot (GCS) Series, GerberColor Process (GCP) SUPER CMYK™ Series, GerberColor Medal (GCM) Series, GerberColor Transparent (GCT) Series Foils, GerberColor Special Effects Series (GCX) Foils, and ColorSet™ Foils can be used to print onto Series 220.

Gerber standard tack application tape is required to be used as the transfer carrier for all printed graphics.

PROTECTING GRAPHICS

Gerber Scientific Products, Inc. offers five products that are designed to protect vinyl and printed graphics.

Gerber Guard™ is a durable, dimensionally stable, glossy vinyl overlamine. This film has a petrochemical-resistant construction and is intended to be used when markings may be exposed to petrochemical spillage and/or severe handling conditions.

Gerber UV Guard G5 is a 1 mil high gloss clear polyester film that is graffiti resistant and provides 5 year protection from the sun.

Gerber UV Guard 9 is a glossy 1 mil, clear, polyvinylfluoride laminating film that provides 9 year protection from the sun.

Abrasion Guard SPF™ is a clear, top-coat GerberColor Foil designed to protect graphics from moderate contact or handling and from moderate UV exposure.

Matte Clear is a clear matte finish, top coat GerberColor Foil designed to reduce glare and protect graphics from moderate contact or handling.

CUTTING

Series 220 can be cut on any Gerber 15" sprocketed plotter, plus any FasTrack™ or Odyssey plotters. A 30° SuperSharp blade is recommended for tangential plotters (HS15™, HS15 Plus, GSX™, GS15™, GS750™, HS750™, SMIVB™). A 45° blade should be used with swivel knife plotters (FasTrack™, EmbossTrack™, enVision™, and Odyssey™). Plotters can be set to full speed.

The minimum recommended cutting height for text is .375". This recommendation is based upon evaluations using upper case Helvetica Medium copy. Users should verify their own ideal cut heights based upon their specific cutting equipment. The user should perform a test cut to determine the ideal tool force setting.

Excess film should be weeded within 24 hours of cutting to minimize the effect of adhesive flow.

SUBSTRATE PREPARATION

Before applying your graphic, wash the surface of your substrate with warm water and detergent. Do not use soaps or other cleaners with lotions or creams as they will leave a residue. Thoroughly rinse the surface and allow it to completely dry.

Saturate a clean paper towel with a solvent-based cleaner and wipe the substrate surface. Be certain to follow all manufacturer safety guidelines when using any solvent. Dry the surface with a lint-free paper towel before the solvent evaporates.

If applying to glass, wipe the surface with a 2 to 1 mixture of water and isopropyl alcohol. Glass temperatures can vary across the surface. These temperature variations can produce stresses that may cause the glass to break. Use caution when applying to glass.

Some polycarbonate substrates may weaken when certain vinyl films are applied to them. Because of this possibility, the user will need to determine if safety items such as helmets, safety shields, and some windshields are compatible with their vinyl's adhesive.

Many paint systems (e.g. two-part urethane) and some plastic substrates will outgas if they are not fully cured. Outgassing can cause permanent bubbling in most films; substrates should be tested for outgassing prior to final application. Plastics should be dried at 150°F (66°C) for 24 hours prior to application to help avoid outgassing.

APPLICATION TECHNIQUES

Both wet and dry application methods may be used with Series 220 and panels should be overlapped. Gerber standard tack application tape is recommended for all EDGE printed applications (see "Printing" section for important information on applying EDGE graphics.)

PHYSICAL PROPERTIES

Property	English Units	Metric Units
Dimensional Stability	0.01 in	0.2 mm

Tensile Strength	5 lbs/inch at 73°F	0.9 kg/cm at 23°C
Reverse impact resistance	No cracking at 73°F or 40°F	No cracking at 23°C or 4°C
Minimum Application Temperature	40°F	4°C
Service Temperature Range	-40°F to 225°F	-40°C to 107°C

ADHESIVE CHARACTERISTICS

Material	English Units - Pounds/inch	Metric Units - Kg/cm
Acrylic	4	0.7
Acrylic enamel	4	0.7
Alodine aluminum	8	1.4
Chrome plating	5	0.9
Fruehauf prepainted panels	4	0.7
Polycarbonate	4	0.7
Urethane paints	4	0.7

FLAMMABILITY

Series 220-10 (white) has been tested for flame spread per ASTM E84-95, "Surface Burning Characteristics of Building Materials," and meets the requirements of National Fire Protection Association Class A (1) (most fire resistant class) as defined in NFPA 101, "Life Safety Code."

For help with questions concerning Gerber products, please call your distributor or Gerber Sales Support at 1-800-222-7446 or (860) 644-1551.

The GERBER EDGE and EDGE2 are Registered Trademarks of Gerber Scientific Products, Inc.

GerberColor, GerberColor SUPER CMYK, Gerber Guard, Gerber UV Guard, Abrasion Guard SPF, ColorSet, Odyssey, enVision, FasTrack, HS15, GS15, GSX, GS750, HS750, SMIVB, and EDGE READY are Trademarks of Gerber Scientific Products, Inc.

PANTONE® SIMULATE COLOR REFERENCE

PANTONE® Simulated Color Reference Table		
PANTONE Simulated Color	Gerber HP Series 220 Color Name	GSP Pigment Code
Process Black C	BLACK	220-12
Orange 021 C	BRIGHT ORANGE	220-14
Cool Gray 2C	PEARL GREY	220-11
Black C	MATTE BLACK	220-22
109C	BRIGHT YELLOW	220-15
175C	RUSSET BROWN	220-29
179C	WARM RED	220-253
186C	PERFECT MATCH RED	220-263
214C	PROCESS MAGENTA	220-273
220C	RASPBERRY	220-133
241C	DARK MAGENTA	220-163
289C	LIGHT NAVY	220-197
301C	INTENSE BLUE	220-47
320C	BLUE BIRD	220-377
322C	TEAL	220-96
323C	BERMUDA BLUE	220-357
348C	BRIGHT GREEN	220-186
349C	CACTUS GREEN	220-266
422C	MEDIUM GREY	220-31
434C	PALM OYSTER	220-21
872C	GOLD - Metallic	220-131
877C	SILVER - Metallic	220-120
1235C	SUNFLOWER	220-25

1795C	TOMATO RED	220-13
2727C	PERIWINKLE	220-387
2756C	ROYAL BLUE	220-87
2767C	NAVY	220-27
2935C	MATTE BLUE	220-407
2975C	POWDER BLUE	220-347
3302C	FOREST GREEN	220-66
4625C	DEEP MAHOGANY BROWN	220-19
5305C	PALE LAVENDER	220-138
7461C	OLYMPIC BLUE	220-57
7510C	IMITATION GOLD	220-105

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