Piedmont High Impact Polystyrene

Distributed by Piedmont Plastics, Inc. *www.piedmontplastics.com*

GERBER SOLARA ion

GERBER M SERIES

Material Performance Testing

See "Rigid Material Application Notes" and distributor's website for specific, detailed guidelines and instructions, if available.

GENERAL INFORMATION

MATERIAL DESCRIPTION

Piedmont purchases High Impact Polystyrene and corona treats it in order to give it excellent ink adhesion; It is easily cut and fabricated, yet has superior toughness, tear resistance, and excellent print qualities. These properties, together with it being a cost effective alternative to PVC with enhanced performance characteristics versus standard Polystyrene, makes it suitable for a variety of applications; designed to meet the die cutting, lamination, and printing needs of the card stock and POP industry.

QUALIFIED MATERIAL SPECS

.040" thick

RECOMMENDED APPLICATIONS

- P-O-P Displays
- Phone, gift, and membership cards
- In-store signage

CAUTIONS

1. Be specific when ordering material as there are many similar materials and finishes, yet performance and results will vary significantly, even among like materials.
2. Be sure to measure dimensions of material prior to printing as they are not always consistent.
3. The following may cause adverse effects on ink adhesion and durability:
   - Using old corona treated stock; the effects of corona treatment dissipates over time. Be sure to use newest stock available for best results.
   - Failure to print under recommended ambient conditions and to acclimate material to ambient conditions for at least 24 hours
   - Neglecting to properly clean the print surfaces. This will allow debris to be visible after printing. Ensure that 99% isopropyl alcohol is used for cleaning.
   - Using thinners or soaps which may leave a film residue which can affect adhesion. Additionally, cleaners containing silicone can interfere with adhesion and are not recommended.
   - Elevated UV exposure can affect plastics printed with UV ink, causing brittleness in the printed areas of the sheet.
4. Ink adhesion increases at higher pass modes (8 Pass > 4 Pass > 2 Pass).

***WARNING:** Be sure that material is completely flat. Bent edges may cause damage to printheads and/or other hardware. Tape down edges as necessary. Leaning may cause warping.*

PERFORMANCE TESTING RESULTS

See "Material Performance Testing Process" document for process explanation and test conditions.

ADHESION TESTING

Tape Test: Level 5, Excellent
Cross-Hatch Test: Level 1, Poor

ABRASION RESISTANCE

Level 5, Excellent

CHEMICAL RESISTANCE

Level 5, Excellent

OUTDOOR DURABILITY

GerberCAT inks are outdoor durable for up to 3 years. Consult material manufacturer for durability of substrate. Testing of application in intended environment is advised.

TESTED PRINT CONDITIONS

AMBIENT TEMPERATURE

70°F (21°C)

AMBIENT HUMIDITY

40%, non-condensing

PRINTER RESOLUTION

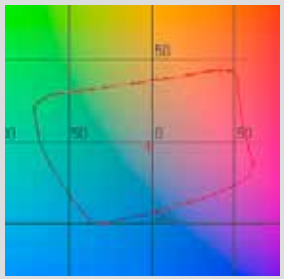
360 dpi

PRINT MODE

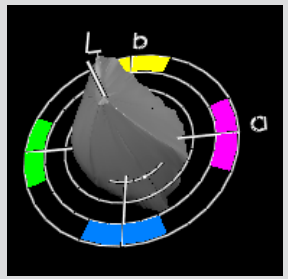
4 Pass, Unidirectional

COLOR GAMUT

2-DIMENSIONAL



3-DIMENSIONAL



MATERIAL HANDLING RECOMMENDATIONS

STORAGE

1. Flat, horizontally only. Leaning will allow warping.
2. Cool, dry, clean area with stable temperature.

SURFACE PREPARATION

1. Print surface should be free and clear of any surface contaminants (i.e. oils, dust, fingerprints, etc.) prior to printing.
2. Clean with 99% isopropyl alcohol, using a non-colored cloth. Best results have been obtained when applying the alcohol to the wiping cloth rather than directly to the material.

POST-PRINT

Ink cures enough to be touched immediately without adverse effect. Full cure occurs between 15 minutes and 24 hours dependent upon material and ambient conditions. Cutting, routing, or any additional undertakings should run flawlessly. If any flaking or cracking occurs, allow to sit 24 hours for full cure. Best cutting results are obtained with carbide-tipped router bits.

See manufacturer's website for more information.

COLOR MANAGEMENT

RECOMMENDED RENDERING INTENTS

CMYK Vector: Relative colorimetric
CMYK Image: Perceptual
RGB Vector: Relative colorimetric
RGB Image: Perceptual

MATERIAL PROFILES

The recommended profile can be downloaded from the corresponding materials page on the gspinc.com/applications webpage.

***CAUTION:** Failure to manage color settings consistently throughout the entire workflow, from image generation through final print, will result in guesswork and unpredictable and potentially unfavorable end results.*

GERBER SCIENTIFIC PRODUCTS