Serigraph Specialty Graphics Technology Overview With Patent Coverage's

Micromotion

Patented technology designed to simulate micro- embossing. Has the highest amount of visual impact of all technologies but is also the most cost effective technology offered. Micromotion is printed on the front side of material. Works the best on foil based materials or against dark colors. Not recommended for use with light colors such as white, yellow or pastels.

Suggested Use: Most commonly used to help highlight a product or element in a graphic by drawing attention to it with a burst pattern created with MicroMotion. A burst pattern is the most common pattern used, however, other patterns are available to create different looks and effects.

Materials: Foil laminated plastic or board; foil board; White Board stock or white plastic when using dark colors.

Patent 1,284,870 covers Europe

Patent 7,290,802 covers United States

Patent 7,290,803 covers United States (broader scope)

Patent 100412 covers Australia

European application for 2010 is 10042 or 2006100412, G&K application number is 2672-0212, European application is 2 114 691

Patent for Russia awarded 2-5-14, Patent # 2503983

Premier Illusion

Proprietary technology designed to simulate traditional embossing where you can feel the texture. Has a uniform gloss level across the entire part. Premier Illusion is printed on the front side of the material. Works the best on foil based materials or against medium to dark colors, but can be printed on paper or other plastic materials. Not recommended for use with light colors such as white, yellow or pastels.

Suggested Use: Typically used to outline a graphic to create definition and contrast through a raised texture. It is also used to create broad raised texture areas through a graphic.

Materials: Foil laminated plastic or board; foil board; Board stock; White or clear plastics.

Patent terminated 5-28-13 Patent 6,113,149 covered Europe

Patent terminated 5-28-13 Patent 6,979,487 covered United States

Select Metalization

Patented technology used to replace conventional foil stamping processes. Excellent choice for multiple images on a sheet that uses different designs in each image, or for large coverage areas where foil stamping would not be cost effective. Technology is applied to the front side of the material. Can be used with any art on clear, white, or foil based materials.

Suggested Use: Use to create a select metallic look on graphics.

Material: Clear; white; or foil based materials.

Patent 7,048,307 covers United States (broader scope)

Liquid Ink

Proprietary technology used to simulate a thick wet, raised water droplet effect. It can also be used on select broader areas of artwork. Technology is printed on the front side of the art. Works well with most materials, clear, paper, white plastic and foil based materials.

Suggested Use: Use to create select raised, high gloss, wet looks in graphics. It is an excellent way to highlight a section of a graphic with high contrast against other elements. This is a good method for simulating water droplets.

Materials: Clear; white or foil based materials.

No patent coverage

Reflex

Proprietary technology designed to simulate traditional embossing, but you cannot feel the texture. Reflex is printed on the backside or second surface side of the art, after which a foil based layer must be applied using proprietary manufacturing equipment and process. Works only with clear materials such as PVC, PETG, APET and polycarbonate.

Suggested Use: Use to create definition, contrast and an illusion of depth through texture, within a graphic when you want a visual (not raised) effect. Provides an overall high gloss look to the graphic.

- **Materials:** Works only with clear materials such as vinyl PVC; PETG; and Polycarbonate.
  No patent coverage

Reflexxions

Proprietary technology similar to Reflex designed to simulate traditional embossing, where you cannot feel the texture. Also has a proprietary matte finish to create ultra-contrast. The contrast of the highly polished clear material vs. the matte finish creates a stunning effect that draws attention to the graphics. Technology is printed on the backside or second surface side of the art, after which a foil based layer must be applied using a proprietary manufacturing process and equipment. That is followed up with the matte finish on the front or first surface. Works only with clear materials such as vinyl, PETG, and polycarbonate.

Suggested Use: Use to create definition, contrast and an illusion of depth through texture within a graphic when you want a visual (not raised) effect. Provides a selective high gloss and contrasting dull finish look to the graphic.

- **Materials:** Works only with clear materials such as vinyl PVC; PETG; and Polycarbonate.
  No patent coverage

Liquid Metal

Patented technology that falls under the Select Metalization family. Provides a thick wet metallic look to the art. Not to be used for precise copy/art, but is ideal for novelty images. Technology is applied to the front side of the material. Can be used with any art and clear, white, or foil based materials.

Suggested Use: Use to create a thick molten metallic look to select areas of a graphic.

Materials: Clear; white or foil based material.

No patent coverage

PRoMotion

Patented technology that allows selected areas to be viewed as 3D or floating. Similar to Lenticular, but can be done selectively. The base art is either printed on the back side of a clear material and then the technology is printed on the front side of the material, or the base art is printed on the front side of white material, a thin layer of a special optically clear film is then applied over that and finally the technology is printed on the front side of the film. Clear base materials are .020 & .030" clear PVC; Clear PETG; Clear Polycarbonate and clear APET.

Suggested Use: Use to focus attention on a product. The product prints clear because it is not printed on a lens. Printing a lens around the element being highlighted creates the 3D or floating illusion.

Materials: Works only with clear materials such as PVC; PETG and Polycarbonate.

Patent 6,833,960 covers United States

Patent 6,856,462 covers United States

Patent application 12/026,069 covers United States and PCT. Issued as **Patent** number 7,609,451 on 10-29-09, now **Mexican** patent approved (295565) as of 2-2-12. **Canadian** application approved as or 4-27-14 number 2,714,275. **Korean** application approved as of 5-26-14. Number 10-2010-7019741 and is national entry phase of PCT/USO9/033179. **Chinese** application now approved on 9-5-14 as PCT/US09/033179 and **Chinese** appl as No. 200980112482.7

Visa Promotion coverage includes;

- Europe pending
- Australia issued
- Canada issued
- Japan issued
- South Korea issued
- Mexico issued
- Brazil pending
- China issued
- Russian federation issued (2503983) 2-5-14

All other non-Visa coverages were abandoned

- **Foldable Standee -** with non-creasing graphic layer. **Patent application number 61/452,489**

- **Slatted Wall Covering - Patent application number 61/481,570**

Lenticular

A process involving extreme resolution and production precision to create graphic images with 3D, morphing, animation, or other multiple imaging effects. Images are printed using high-resolution layered files. Works as a second surface printed graphic on APET and PETG lenticular lens materials.

Materials: .010" Lenticular = 140 lpi – general cheap version for limited 3D and flip.

.018" Lenticular = 75 lpi – designed for smaller images; gift cards; post cards etc.

.024" Lenticular = 60 lpi – flip and animation (good for complex flips)

.027" Lenticular = 62 lpi – 3D

Suggested Use: For creating 3D images and depth within a graphic. The process is also used for morphing or flipping one image to another image, or making images appear and disappear. Also used to create an illusion of motion and movement.

Aveta

Similar to Lenticular but using a proprietary process that uses a crystal-clear technology to make the product the hero of the shot where the lenticules usually break up the product or make fine copy such as legal lines hard to read. A process involving extreme resolution and production precision to create graphic images with 3D, morphing, animation, or other multiple imaging effects. Images are printed using high-resolution layered files. Works as a second surface printed graphic on APET and PETG lenticular lens materials.

Suggested Use: For creating 3D images and depth within a graphic. The process is also used for morphing or flipping one image to another image, or making images appear and disappear. Also used to create an illusion of motion

and movement. Use where crystal clear graphics and fine copy are desired, but also wanting the attributes of Lenticular.

Materials: .010" Lenticular = 140 lpi – general cheap version for limited 3D and flip.

.018" Lenticular = 75 lpi – designed for smaller images; gift cards; post cards etc.

.024" Lenticular = 60 lpi – flip and animation (good for complex flips)

.027" Lenticular = 62 lpi – 3D

Patent application terminated. Patent Pending is 61/247/326

Neon

Neon colors provide attention to graphics with bright bold colors. Neon effects are best provided with screen-printed inks that are brighter, bolder and cleaner than their litho printed counter parts. Neon inks work well on all substrates including clear and opaque plastics, foils, and board.

Suggested Use: Use with reflective or backlit applications for a simulated neon sign look. Use to grab attention through the use of bright, bold attention getting colors.

Materials: Clear; white or foil based material.

No patent coverage

Glitter

Add sparkle to a graphic with glitter which are metallic flakes suspended in a clear ink. Glitter is available in a variety colors and is applied through a screen-printing operation. Glitter can be applied selectively or overall to a graphic. It works well on opaque and clear plastics, foil substrates, and board materials.

Suggested Use: Use to create a "sparkle" effect in graphics. Glitter has been used to create the image of salt on a Margareta glass, snow, sugar, and light reflecting sparkle effects in backgrounds or on images.

Materials: Clear; white or foil based material.

No patent coverage

Embossing

Achieve a 3-dimensional look to flat graphics. Embossing is a secondary technique used to raise line texture or broad solid areas in a graphic using a tool designed for the graphic. The effect achieved can be more dramatic when used on reflective foil or holographic substrates. The overall effect can be brilliant or subtle depending upon the reflectivity of the substrate used. This process works with paper, board, or thinner opaque or clear plastic materials.

Suggested Use: Use where a 3-dimensional raised look is desired in fine or broad areas in a graphic. Embossing can add additional impact to an otherwise flat graphic.

Materials: Paper, foil based materials such as paper; thin plastic, white or clear.

No patent coverage

Dome Coating

A process where an overall clear thick resin coating is applied over a graphic to achieve a high quality clear dimensional look. This process works with round, rectangular, or irregular shaped graphics. Works best with opaque, chrome, or holographic pressure sensitive materials.

Suggested Use: Decals or other pressure sensitive applications where a clear raised dome over the graphics is desired to create a dimensional lens type look.

- **Materials:** Works best with opaque, chrome, or holographic pressure sensitive materials.
  Critical attributes: Best to use a poly liner and not a paper liner based substrate.

No patent coverage

Thermochromic Ink

Thermochromic inks use state of the art polymer liquid crystal technology to create exciting graphic enhancements. When subjected to a specific temperature the ink will react to reveal or hide a message or image. They can also be formulated to react to temperature sensitivity to create color changes from black through several other colors. Thermochromic inks can be incorporated over or under offset inks on graphics to create dramatic effects. This technology will work on most plastic and board substrates.

Suggested Use: Use in applications to create images or messages that appear or disappear when heat or cold is applied. Also use in applications where a color change is desired to create a graphic impact or message.

Materials: White or clear plastic; Paper.

No patent coverage

Chrome/Holographic Laminates and Substrates

The bright reflective surface provided by chrome and holographic laminates and substrates provide opportunities for enhanced graphics by providing a metallic, light catching, reflective, or special effect type surfaces for printed graphics.

Suggested Use: Used to create a high end, upscale look to printed graphics. Chrome is commonly used when a metallic look is desired for the graphic. These materials work well when combined with most other print technologies by providing a light catching reflective surface.

Materials: .015" or thicker white or clear PVC; most other plastics such as APET; PETG and Polycarbonate. Most paper based stocks.

No patent coverage

Vacuum Forming

Vacuum forming offers a way to create dimension and depth with your art. Various materials and print processes can be used depending on the depth of draw desired. For a deeper draw a thicker base material is used along with screen inks. For shallow depth (1cm or less) litho quality graphics can be printed. Foil laminates can be incorporated to add brightness and added dimension, but are also limited to 1cm in height for forming.

Suggested Use: Vacuum formed pieces can be used to decorate small or large displays, window or cooler door advertising, wall signs, floor standees or ceiling mobiles. It can also be used to create functional displays to hold product. Formed signage can also be used for outdoor use, using different materials.

Materials: Styrene; PVC; PETG; APET; Polycarbonate

No patent coverage

Galaxy

Typical Glitter is printed on the front side of the graphics and has a gritty, sandpaper like look and feel to it. Galaxy offers an amazing sparkle without the grit, similar to the paint job on a car. Add sparkle to a graphic with glitter which are metallic flakes suspended in a clear ink. Galaxy is available in a variety colors and is applied through a screen-printing operation. Galaxy can be applied selectively or overall to a graphic. It only works with clear plastics such as PVC, PETG, APET and Polycarbonate and can also be combined with Reflex.

Suggested Use: Use to create a "sparkle" effect in graphics. Galaxy has been used to create the image of twilight around an image, and gold flake to tie in with alcohol related graphics.

Materials: Clear material only; Polycarbonate; PETG; PVC from .010" thick and up.

No patent coverage

Partner With Us

By providing innovative, eye-catching technologies and services Serigraph enables customers to differentiate their brands and stand out at the point of decision.

To learn more about what Serigraph can do for you visit us at: www.serigraph.com or email us: info@serigraph.com