

Screen Printing Glossary

This glossary was written by [All American Print Supply Co.](#) and edited by Carousel's for clarity and additional information.

A

Acetate Film – A type of translucent paper that can be used to create a film positive with an inkjet or laser printer.

Artwork – Refers to the image or text that will be used during the screen printing process.

Automatic Press – A screen printing press that operates using a pneumatic or hydraulic system and uses an electric or pneumatic motor. Automatic screen presses have a higher production rate and print quality than manual presses.

B

Bitmap (or Raster) – Is an electronic image that is stored as a series of tiny dots called pixels. Each pixel is actually a very small square that is assigned a color and then arranged in a pattern to form the image. When you zoom in on a bitmap, you can see the individual pixels that make up that image. Using a program like Adobe Photoshop, bitmap graphics can be edited to change the color of individual pixels or erased.

Bleeding – Occurs when ink flows beyond the boundaries of the stencil or is used to describe one color migrating into another.

Blend – The act of printing with two or more inks simultaneously to create a gradient effect.

Block Out – 1. The act of applying a small patch to cover an open section of mesh; 2. an air-drying liquid that fills pinholes in a stencil.

Burn – The act of exposing an emulsion coated screen to a light source to make a stencil.

Butt Registration – When the artwork is aligned against another color without a gap in between.

C

Carousel – A rotary screen printer with 4 or more color stations.

Catalyst – An ink additive that promotes ink bonding to nylon and synthetic fabric. For example, 900 Series Nylon Ink require IC 900 Catalyst to get the ink to adhere to fabric.

CMYK – Also known as four-color process or full-color process, is a printing process that uses four ink colors (cyan, yellow, magenta, and black) to print almost any color. CMYK requires a white background or white ink under base to produce prints on fabric.

Colorfast – Describes the garment's ability to survive repeated washes after printing without the artwork losing any color.

Color Separation – When screen printers take a full-color image and separate the individual colors to break down the image so that it can be printed.

Coverage – The amount of ink laid down on a garment during printing.

Cure – Most kinds of ink will gel or flash when the ink reaches around 220°F and cure completely at around 320°F. If the ink isn't properly cured to the fabric, it will not withstand washing.

D

Degreasing – The process of washing screens with an industrial strength degreaser to remove contaminants like dust, dirt, and oil. When you purchase a screen, you must degrease it to keep the emulsion from separating from the mesh. Using household degreasers on screen mesh is not recommended.

Diazo Emulsion – One of the three types of liquid emulsion (along with dual cure and photopolymer). Diazo emulsions are recommended for beginners because it takes longer to

expose but produces good-quality stencils. Also, the emulsion changes color after exposure for easy pinhole spotting.

Discharge Ink – Used to print light colors onto dark fabric, this type of ink works by removing the dye from the garment fibers.

DPI – Or “dots per inch” is the measurement of the number of individual dots that can be placed in a line within a span of 1 inch. This is used to refer to spatial printing and video dot density.

Dual-Cure Emulsion – One of the three types of emulsion (along with diazo and photopolymer). A hybrid emulsion created by combining diazo and photopolymer in one, dual-core emulsion produces finer stencils than diazo, is less expensive than photopolymer, and resists humidity.

Durometer (Duro) – Refers to the hardness or stiffness of the squeegee blade.

Dyed Mesh – Mesh fabric that has been tinted with color to reduce light transmission.

E

Emulsion – A photosensitive/photopolymer film or chemical that is applied to a mesh and then developed by exposing the screen to a specific part of the UV light spectrum.

Emulsion Remover/Recalimer – A chemical used to reclaim screens that are covered in an emulsion. Also known as a stencil stripper or remover.

Exposure Unit – A machine that emits UV light to expose screens for making photo stencils.

F

Film – A term used to refer to a film positive.

Flashing – 1. The process of printing the same color twice onto fabric most often used when printing light-colored ink on a dark material; 2. applying heat to a substrate while it is still on

the press to gel the top layer of ink. Remember, flash dried ink is not completely cured and will not withstand washing.

Flood – The act of filling the open stencil areas and mesh with ink before pushing the ink through.

G

Ghost Image (Ghost Print) – A faint but visible image on the screen leftover from a previous ink or artwork.

H

Halftone – The process of creating images through the use of dots, varying either in size, shape or spacing. The dots are so tiny to the naked eye they blend to create varying shades of a color. Halftones are specified in LPI (lines per inch). Higher LPI produces finer detail.

Handfeel or Hand – 1. A term used in the fashion and textile industries to describe the texture or feel of the fabric; 2. the texture or feel of a print that has been applied to the fabric. In the printing world, a soft hand feel print is the most preferred.

Haze Remover – A one or two part chemical remover used to clean faint ink stains or ghost images from the screen mesh.

I

Image Area – The section on the screen where the image appears.

Ink Additive – Refers to chemical agents that can be added to the ink to change viscosity, adhesion, drying time and more.

L

Line Art – Artwork consisting only of outlines filled solid with no halftones.

LPI – Or “lines per inch” are printing lines of dots that create halftone dots for exposure.

M

Manual Press – A screen printer that is operated by hand.

Mesh – The woven material stretched across the screen printing frame.

Mesh Count – The amount of threads of mesh that cross per square inch. A high mesh count means finer threads and holes while a larger mesh count has coarser threads and larger holes. You can purchase a mesh counter to gauge mesh count as each type of mesh works better with a certain type of ink.

| Mesh Count | Ink Compatibility |
|------------|---|
| 24 – 86 | Specialty Ink |
| 110 | For light-colored ink such as white |
| 160 | For dark ink such as black. Hold more detail than 110, but less ink will pass through the screen. |

200 – Yields high-detail results, but the ink regardless of color may need to be reduced with an additive for mesh this fine.

230 – Used for super-fine detail printing, halftones, solvent based inks and
305 CMYK process prints.

Misprint – A finished print with a defect.

O

On-Press Wash/Plastisol Remover – A chemical cleaner used to remove ink from screens but not emulsion allowing the stencil to be used again.

Opacity – The ink's ability to cover the color of the substrate. For example, it is important to have a white ink with a high opacity to use as an under base for printing on dark-colored garments.

Orange Peel – A defect that results in the print having an orange peel or basketball-like texture usually caused by the ink sticking to the mesh or low ink viscosity.

P

Pallet/Platten – Is a smooth flat surface for holding the garment during the printing process.

Pinhole – A small hole in the stencil that allows unwanted ink to pass through the screen leaving behind dots on the finished print.

Print-Ready Art – Artwork that is ready to be burned onto film or vellum for production and requires no alterations.

Plastisol Ink – A plastic-based ink that makes a long-lasting, washable print on fabric. Plastisol ink must be cured with heat to survive washing.

PMS Color – Or Pantone Color Matching system is a method of matching colors developed by Pantone.

R

Reclaiming – The process of removing emulsion from the screen so it can be reused.

Registration – An alignment of one color of artwork with another. Prints of more than one color must have each color applied separately with its individual screen. Also, all screens must be lined up correctly with each other as not to overlap or blend.

Retarder – An ink additive that slows the drying time of the ink.

S

Screen – Aluminum or wooden frame with mesh tightly strung in the center. When purchasing a screen consider what type of screen frame is right for you: wooden frames are less expensive but aluminum frames last longer and do not warp when wet.

Screen Opener – A chemical that removes clogged dried ink from a stencil.

Photo Emulsion – One of the three types of emulsion (along with diazo and dual-cure). Photopolymer emulsion is the most light sensitive, expensive, and has the longest shelf-life. Recommended for experienced screen printers and those working with solvent-based inks.

Silkscreen – A screen made of fine mesh that is used in the screen printing process. Also used to refer to a print created using a silkscreen.

Silkscreening – Another name for the screen printing process. Other names include fabritecture and mitography.

Solvent Ink – An oil-based ink typically used for printing on hard surfaces like plastic, glass, metal and more.

Spray Tack/Adhesive – Pallet adhesives used to keep garments in place during printing.

Specialty Ink – Ink that makes a print look visually interesting and textured. Some specialty inks examples include metallic, glitter, high density, glow-in-the-dark, puff, reflective, and gel.

Stencil – The uncovered portion of the screen or “open mesh” that allows ink through the mesh during the printing process.

Squeegee – a flexible rubber urethane or plastic blade attached to a wooden or metal handle. By running the blade over the screen, ink is forced through the mesh making a print.

Substrate – A term for the item being printed.

T

Tension – The tightness of the screen mesh measured in newtons.

Trapping – A method used in Photoshop or Illustrator of adjusting areas where two distinct, adjacent colors meet so that press misregistration won't cause white spaces. If you knock out graphics or type you may have to create a trap to ensure that you don't have white spaces due to misregistration.

U

Ultraviolet Light – Light that consists of electromagnetic waves. Also called black light, UV light is used for exposing screens and curing certain types of ink.

Under Base – The first layer of ink on the garment that when cured acts as the base for all other colors. For example, a white under base is needed if you are printing on a dark garment or with multi colors.

UV Ink – Ink that cures only when exposed to UV light.

V

Vector – Created with a software program like Adobe Illustrator or CorelDRAW, a vector is a clean, camera-ready piece of artwork that can be scaled infinitely without any loss of quality.

Viscosity – The thickness or thinness of the ink. A highly viscous ink is thicker, while a low viscosity ink refers to a thinner consistency.

W

Washout – The act of applying water to an emulsion coated screen after exposure to develop the image on the screen.

Water-Based Ink – Water soluble ink that dyes the garment and becomes a part of the fabric.

Wet-on-Wet Printing – The act of consecutively printing color without flash curing in between.