



Technical Data Sheet

Technically Advanced Silicone Ink



ImageStar 4200 Silicone Clear Gel 2-Part Textile Ink

IMS4200 Silicone Clear Gel is a 2-part clear textile ink that is applied as a top print in the apparel screen printing process to achieve a super glossy effect. This product is also an excellent carrier for glitter flakes, glow-in-the-dark pigments, reflective beads, thermochromatic and photochromatic pigments. The IMS4200 Silicone Clear Gel is an addendum to the ImageStar Silicone ink line which was developed for printing on performance wear and smooth polyester fabrics. The ImageStar Silicone PVC Free ink series exhibits superior elasticity and durability when printed on these demanding fabric types.

Ink Mixing Instructions:

Immediately prior to print production, the A and B components of IMS4200 Silicone Clear Gel should be mixed in a 1:1 ratio. No additional catalyst is required. If specialty flakes or pigments are used, 5%-10% (by weight) of glow-in-the-dark and color change pigments can be added, up to 50% (by weight) of the reflective beads can be added.

Only mix the quantity required for one 6-8 hour shift of printing. The ink pot life is primarily determined by ambient room temperature. Higher temperatures can result in shorter pot life. Extended pot life of catalyzed inks that are not in screen can be achieved by covering the ink container and keeping in a cool location. Do not place containers near flash units.

If longer pot life is needed, additions of 1%-3% of IMS2201 Silicone Retarder by weight can be added as needed.

For shorter flash times in an automatic screen printing application, the cure rate can be accelerated by a 1-2% addition of the standard ImageStar Silicone catalyst (IMS2200).

Printing / Curing Instructions:

Screen Mesh – To achieve a smooth print surface, 86-156 mesh is recommended for stretch and athletic apparel. Overprint onto flashed ImageStar Silicone colors or print directly onto fabric for a super gloss effect.

Stencil – A good EOM (emulsion over mesh) ratio with an even shirt side coating surface helps to ensure a consistent and smooth ink deposit.

Flash – The ImageStar Silicone ink will typically flash dry at temperatures of 180-200°F (82-93°C). Flash times are normally achieved in 4-6 seconds. ***When over-printing the IMS4200 Gel Clear on top of other IMS Silicone inks, do not over-flash the first silicone ink layer. Ink film should be dry to the touch, over flashing can result in inter-coat adhesion on some substrates. Test print your material prior to running production.***

Curing – After printing, the printed image should be oven cured at 248-284°F (120-140°C) for one to two minutes to ensure full cure and wash fastness. Excessive heat can result in a print surface that is tacky. Reduce heat and/or dwell time if this occurs.

Cure can be inhibited by contact with certain materials such as amines, sulfur and tin complexes. The effect on the printing is an incomplete cure. The resultant print will feel sticky. In some cases this can be recovered with the addition of further heat. Avoid any potential for cross-contamination with PVC containing products.

Screen Cleaning/Clean Up – Clean the screen right after the printing operation is complete, as the ink will continue to cross link and cure with time. Uncured catalyzed ImageStar Silicone inks can generally be removed from the screens and equipment with the same cleaning agents used to remove plastisol inks. In addition, hydrocarbon-based solvents such as mineral spirits can be used.

Please reference ***the ImageStar Silicone Info Guide*** for more details regarding printing, curing and storage parameters.

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