SILEXTREME Inks are highly suitable to print on performance wear and smooth polyester fabrics to provide a wide range of benefits such as high elasticity, soft feel and long term durability. The SILEXTREME SXT Ink system is activated by the addition of our proprietary SXT Catalyst and is cured at a temperature of at least 270°F (132°C) to provide superior performance.

By using our standard portfolio of preset SXT Toner colors or our color mixing system, our customers can create the hottest team colors or any desired Pantone shade.

- Meets US, EU and Asia Standards
- Low Temperature Cure
- PVC Free
- RSL Compliant
- Athletic Toners
- Automatic & Manual Presses
- FX Shimmers & Metallic
- High Wash Resistance
- Distinctive Hand
- Ultra Elongation
- High Opacity

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SILEXTREME

SILICONE SCREEN PRINTING INKS

YOUR HIGH PERFORMANCE SOLUTION TO MEET TODAY'S CHALLENGING DEMANDS

Rutland
Plastic Technologies, Inc.

Rutland's SILEXTREME SXT Inks are based on cutting edge silicone polymers for delivering the ultimate stretch and feel on the latest performance fabrics. These inks have been innovatively designed to bring out the strengths and benefits of silicone chemistry to your existing textile screen printing operation.

UNIQUE FEATURES

Provides excellent soft drape, soft to touch hand feel, and is highly suitable for soft fabrics.

Lower cure temperature leads to minimal damage on sensitive fabrics and very little impact on dye migration and is ideal for polyester performance fabrics, wetsuits, swimwear and sublimated clothing.

Has high degree of stretch and elasticity — can expand with the fabric when stretched and is ideal for highly elastic materials such as Spandex, Polyester and Blends.

Highly durable — can withstand heavy washes and has long term durability.

More heat resistant — can withstand higher temperatures once completely cured and can be ironed on a regular basis.

APPLICATIONS

Prior to printing, one must add up to 5% SXT CATALYST to any mixed color (only catalyze enough amount for up to 1-2 days of print production as addition of the catalyst creates a pot life). Make sure to mix the catalyst thoroughly. For maximum opacity and brilliance of the colors, use print - flash - print method. Catalyzed inks are best stored under room temperature or less.

RECOMMENDED BEST PRACTICES

PROCESS

Mix SXT Toners with SXT Matte Base and SXT Catalyst, mix thoroughly and you are ready to print. Mix the catalyst with RFU White at 4 to 5% percent by weight of catalyst. Use 4% for longer open time, 5% for the shortest flash. The SXT Catalyst is to be used with Toners at 3-5 % depending upon desired conditions and length of pot life needed. (longer pot life with the lower amount of catalyst). SXT Mixed inks print on light and dark cotton, cotton/polyester blends, and 100% polyester (some difficult fabrics may require an underbase with SXT BARRIER BLACK).

FLASH (TIME AND TEMPERATURE)

Recommended flash time is 6-10 seconds or less on hot pallets that are at least above 120°F.

SQUEEGEE

Recommended squeegee is a medium durometer of 70 hardness.

CONTAMINANTS TO AVOID

Any contamination by materials such as tin complexes, sulfur and amines must be thoroughly avoided, as these will retard the curing process and negatively affect the adhesion of silicone inks. Typically dark colored garments such as black or blue may contain sulfur dyes that can inhibit curing. Also, avoid any potential of cross-contamination with PVC containing products.

Screen printing pallets must be free of any non-silicone ink residue. Even small amounts of PVC plastisol ink deposit on the pallet can release plasticizer under heat that will inhibit the curing of the silicone ink.

MESH

Recommended mesh size of 86-230.

CURING (TIME AND TEMPERATURE)

For best curing conditions of the silicone polymer, we recommend a minimum ink film temperature of 270°F (as measured on wet ink) for a period of 15 seconds. This is not to be confused with actual dwell time and temperature in the oven. The above curing recommendation can be typically achieved with a 1 minute dwell time in the oven that is set above a temperature of 270°F.

CLEANING UP

Similar to standard plastisol inks. Screens should be completely cleaned before using other inks.

BREAKDOWN OR STOPPAGE PROCEDURES

Recommend using catalyzed silicone ink within 72 hours. Do not leave catalyzed silicone ink on the screen.

STORAGE CONDITIONS

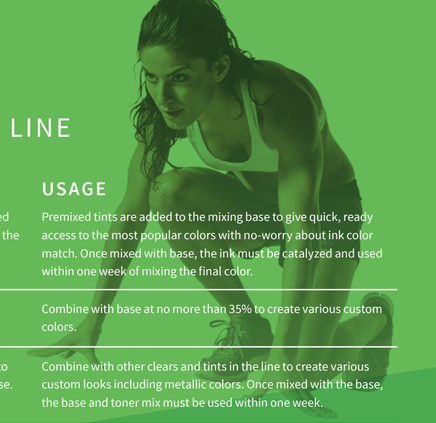
Keep lid on container to prevent contamination and store at 65°F to 95°F. (18°C to 35°C). Once the toner is mixed with base, it must be used in 1 week. Once the catalyst is added the ink pot life is 72 hours.

Under hot weather conditions in the shop floor, it is suggested to add up to 3% retarder and reduce the catalyst amount to 3%. This is to ensure that there will still be sufficient pot life, although the flash time may need to be extended.

LIMITATIONS

SXT inks have a longer flash time than plastisol. Normally 6 to 10 seconds depending on the amount of catalyst and or retarder added.

While SXT inks are perfect for replica jerseys and performance garments, they may not be suitable for "on field" jerseys since silicone inks are softer, and the rubbery surface can abrade or scuff away during rigorous contact during the sport.



SILEXTREME PRODUCT LINE

GROUP	DESCRIPTION	USAGE
SXT Toners	Custom pallet of color toners that are mixed with the Matte Mixing base. After mixing in the specified ratio, the resulting inks are color matched to most popular team colors.	Premixed tints are added to the mixing base to give quick, ready access to the most popular colors with no-worry about ink color match. Once mixed with base, the ink must be catalyzed and used within one week of mixing the final color.
SXT Pigment Concentrates	Concentrated pigment dispersions of 14 colors.	Combine with base at no more than 35% to create various custom colors.
SXT Specialty Toners	Various metallic and special effect toners to be used with either matt or gloss or HD base.	Combine with other clears and tints in the line to create various custom looks including metallic colors. Once mixed with the base, the base and toner mix must be used within one week.
SXT Matt Mixing Base	Silicone polymer base that is used to mix with toners or mixing system pigments as the main binder for the SILEXTREME ink system.	Combine with toners to produce preset tints or use the PC mixing system at up to 35% pigment loading to create all Pantone colors. Use as an ink requires the addition of a toner or mixing system pigment and SXT Catalyst.
SXT Clear Base - HD, Matt and Gloss	Clear polymer base used for creating various effects and clear coats or over-prints.	Mixed with an effect pigment or used as a standalone print, once catalyzed the product is applied to as a top layer for the ultimate in durability and abrasion resistance.
SXT Viscosity Reducer	100% solids, non-volatile viscosity reducer for SILEXTREME inks.	Used at up to 5% by weight to adjust and lower viscosity in specialized applications.
SXT Catalyst	Proprietary cure catalyst for the SILEXTREME ink system. This product is added to the ink just before use and is mandatory in every application.	Used in the range of 3 – 5% on total ink weight just prior to application. Once the catalyst is added, the ink must be used within 72 hours.
SXT Retardant	Cure retardant.	Added at a maximum of 3% on total ink weight to slow cure and extend pot life in hot climates and during long production runs.
SXT Barrier Black - Part A and B	Two part ink system for blocking dye migration on sublimated polyester garments.	Once 40% part A and 60% B are mixed, the ink is catalyzed with SXT Catalyst and applied as a barrier layer over sublimated fabrics to eliminate dye migration to upper layers. Once A and B are mixed, the ink must be catalyzed and used within 72 hours.
SXT RFU Black	Premixed black silicone ink that is ready for use with addition of SXT Catalyst.	Catalyzed with SXT Catalyst and used as a black ink. It may also be used with the mixing system as an ingredient for color matching of desired Pantone colors.
SXT RFU Whites - Matt Elasti-White & Satin White	White inks that are ready for use with addition of SXT Catalyst to produce a matte or satin finish final look.	Mixed at 4-5% with SXT Catalyst and applied directly to the garment or over the SXT barrier black to produce white prints on base or top layer on performance fabrics.