

» PRODUCT SELECTION GUIDE

WILFLEX™

Plastisol Screen Printing Ink



 AVIENT™



Choosing the best screen printing ink for substrate and brand performance can be overwhelming. Wilflex™ offers a broad portfolio of whites, standard colors, mixing systems, and specialty screen printing inks allowing screen printers to find the best inks for their most challenging projects. With an extensive range of inspired, cost-effective inks that meet the industry's strictest compliance standards, Wilflex makes it possible to excel in competitive marketplaces.

QUALITY AND CONSISTENCY

Wilflex™ products are produced to exacting standards and strict process procedures, ensuring quality and consistency of every batch.

Select Wilflex™ inks are certified to **ZDHC Conformance Level 3** with **ECO PASSPORT** by **OEKO-TEX**. To learn more about compliance standards, please contact Avient Specialty Inks.*



PROFESSIONAL SUPPORT NETWORK

Knowledgeable and Highly Experienced Team

Our Avient Specialty Inks sales team has many years of experience in the screen printing industry to help you innovate and succeed, provide troubleshooting support, and solve technical problems you may encounter in your printing production environment. Our customer service team members are always ready to support ordering and fulfillment requests, ensuring a seamless customer experience.

Broad Distributor Network

Our extensive global network of distributors ensures Avient Specialty Inks products and services are available at your location and convenience.

Technical Expertise

We strive to help our customers stay ahead of marketplace trends and demands. Our qualified and experienced Avient Specialty Inks technical team is constantly looking at ways to improve our products' performance and to develop new technologies to meet emerging demands.

WHITE PLASTISOL INKS

Cotton Inks

- **Echo Cotton White** is created with the large contract printer market in mind. It is characterized by its good fiber mat-down, brightness, matte appearance, and great value.
- **Epic™ Sprint White** is a premium ink that delivers superior printability and visual appearance. Epic Sprint White has an extremely fast flash time with minimal after-tack, excellent fiber mat-down, a smooth soft-hand, and bright finish.
- **Shock LC White** is a low cure premium ink that delivers superior printability with an ultra-soft, pliable, and bright finish. Shock LC White has a fast flash and fast print strokes, making it ideal for high production print shops.
- **Revive™ Bio Plastisol™ White** is a white plastisol ink with excellent wash durability and opacity. Revive Bio Plastisol White is created with over 50% bio-derived content and is certified to ASTM D6866.

Nylon Inks

- **One-Step Nylon White** is created for printing on untreated nylon substances. Standard plastisol ink processes are recommended for this high opacity ink.



Bio Plastisol™ Inks

- Avient's Renew portfolio consists of responsibly designed products with specialty and renewable materials thoughtfully engineered to ensure their ability to be transformed into new products or safely biodegraded after use.
- Avient Specialty Inks' biopolymer portfolio incorporates bio-derived resources that promote

Polyester Inks

- **Athletic Poly White** provides good resistance to dye migration and great coverage in polyester garments.
- **Rival Sport™ LC White** is a high-performance, low bleed ink created for polyester sports apparel. Pair with Rival Sport Colors for printing polyester substrates that require low cure temperature.
- **PolyWhite LC Xtra** is a low cure ink with excellent bleed resistance and great coverage.
- **Performance LC White** combines best-in-class bleed resistance with ultra-stretch performance for a premium soft and pliable hand feel. It is created to print onto a variety of specialty fabrics, including compression wear, stretch garments containing spandex, lycra or elastane, polyester, blends, and triblends.

Poly-Cotton Blend Inks

- **Echo LB White** is characterized by its opacity, good fiber mat-down, brightness, matte appearance, and great value. Echo LB White is developed for applications on poly-cotton blends where moderate bleed resistance is required.
- **Epic™ Quick White** delivers superior printability, premium aesthetics, an un-matched soft hand feel, and great fiber mat-down. It is characterized by an extremely fast flash time with minimal after-tack, fast print strokes, and easy mesh clearance for fast production environments.
- **Amazing Bright Tiger White** is a low bleed white ink developed for applications where moderate bleed resistance is required. This white ink is press stable, giving printers flexibility to operate at a wide range of mesh counts, squeegee pressures, and pallet temperatures.
- **Bolt LC White** is a low cure white ink with great opacity. Pair with Rival Sport LC Defender as an underlay to obtain the best low-temperature dye migration resistance on all 100% polyester performance fabrics in the market today.
- **Single LC White** is a flexible cure, non-ghosting white ink for a variety of garment types. Single LC White is characterized by its excellent bleed resistance, stretch, and high opacity.



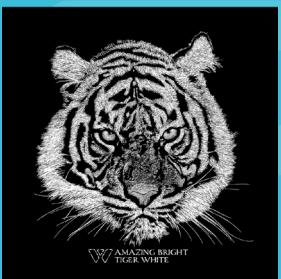
Flexible Cure Inks

- Solutions in Avient's Reduce portfolio reduce negative environmental impacts by using better, cleaner materials that consume fewer natural resources and generate less waste.
- Avient Specialty Inks' reduced energy use portfolio is attributed with reducing energy consumption from typical alternatives, often resulting in decreased carbon emissions and lower energy costs. Achieve your sustainability goals with our flexible cure inks.

Avient offers a variety of low, or flexible, cure inks that can not only reduce energy consumption, but can also minimize dye migration and prevent shrinkage of heat-sensitive fabrics. These inks cure at temperatures as low as 250° (121°C), as opposed to the standard 320°F (160°C) cure temperature of standard inks.

- **Shock LC White, Rival Sport LC White, PolyWhite LC Xtra, Performance LC White, Single LC White, One-Step Nylon White, and Bolt LC White** are classified as flexible cure white inks due to their reduced energy use capabilities.

PRINT GALLERY



Sustainability Spotlight



Biopolymers

Reduced Energy Use

reducing screen printers' reliance on fossil fuel-based inks.

Avient Specialty Inks offers easy-to-print Bio Plastisol inks created with bio-derived content.

• **Revive Bio Plastisol White** is created with bio-derived content, classifying it as a Bio Plastisol ink.

WHITE PLASTISOL INKS

Category		Cotton Inks				Nylon Inks	Polyester Inks				Poly-Cotton Blends					
Product Name	Echo Cotton White	Epic Sprint White	Shock LC White	Revive Bio Plastisol White	One-Step Nylon White	Athletic Poly White	Rival Sport LC White	PolyWhite LC Xtra	Performance LC White	Echo LB White	Epic Quick White	Amazing Bright Tiger	Bolt LC White	Single LC White		
Plastisol Type	Standard cure	Standard cure	Flexible cure	Standard cure	Flexible cure	Standard cure	Flexible cure	Flexible cure	Flexible cure	Standard cure	Standard cure	Standard cure	Flexible cure	Flexible cure		
Colors	White	White														
RECOMMENDED SUBSTRATES																
Cotton	Yes	Yes	Yes	Yes	No	No	Yes									
Cotton/Polycotton	No	No	No	No	No	Yes	Yes*	Yes								
100% Polyester	No	No	No	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes*	Yes		
100% Untreated Nylon	No	No	No	No	Yes**	No	No	No	Yes	No	No	No	No	No	No	
Nonwoven Polypropylene Bags	No	Yes														
PROPERTIES & PERFORMANCE																
Opacity	Better	Better	Better	Best	Better	Better	Best	Better	Best	Best	Better	Better	Best	Best	Better	
Bleed Resistance	N/A	N/A	N/A	N/A	N/A	Better	Best	Best	Best	Good	Better	Better	Best	Best	Good	
Hand	Better	Best	Better	Best	Best	Good	Good	Good	Better	Good	Best	Better	Better	Better	Good	
Wet-on-Wet Capability	Not recommended	Not recommended														
APPLICATION																
Mesh	86–230 t/in (34–91 t/cm)	86–305 t/in (34–120 t/cm)	86–305 t/in (34–120 t/cm)	86–305 t/in (34–120 t/cm)	86–230 t/in (34–91 t/cm)	86–160 t/in (34–62 t/cm)	86–160 t/in (34–62 t/cm)	86–160 t/in (34–62 t/cm)	86–230 t/in (34–91 t/cm)	86–230 t/in (34–91 t/cm)	86–280 t/in (34–110 t/cm)	86–305 t/in (34–120 t/cm)	86–230 t/in (34–90 t/cm)			
Flash	220°F (105°C)	220°F (105°C)	180°F (83°C)	220°F (105°C)	180°F (83°C)	220°F (105°C)	180°F (83°C)	180°F (83°C)	180°F (80°C)	220°F (105°C)	220°F (105°C)	220°F (105°C)	180°F (83°C)	180°F (83°C)		
Stencil	Direct	Direct														
Cure Temperature	320°F (160°C)	300°F (149°C)	270°F–320°F (132°C–160°C)	320°F (160°C)	280°F (138°C)	320°F (160°C)	250°F–300°F (121°C–148°C)	250°F–300°F (121°C–148°C)	270°F (132°C)	320°F (160°C)	300°F (149°C)	300°F (149°C)	270°F–320°F (132°C–160°C)	260°F–280°F (127°C–138°C)		
Wash	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant		
ADDITIVES																
Viscosity Reducer	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	Not recommended	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight										
Bonding Agent	ASI Hugger Catalyst, 10% by weight	ASI Hugger Catalyst, 10% by weight	ASI Hugger Catalyst, 10% by weight	Not recommended	Not recommended	ASI Hugger Catalyst, 10% by weight										
Extender	ASI Finesse, 10% max by weight***	ASI Finesse, 10% max by weight***	Fashion Soft Base	Not recommended	Not recommended	ASI Finesse, 10% max by weight***	Fashion Soft Base	Fashion Soft Base	Fashion Soft Base	ASI Finesse, 10% max by weight***	ASI Finesse, 10% max by weight***	ASI Finesse, 10% max by weight***	Fashion Soft Base	Not recommended		

* When printing on 100% polyester, cure at 270°F (132°C) and pre-test for bleed resistance.

** Not suitable for all nylon substrates, pre-test prior to production.

*** Adding extender to any product will reduce opacity and performance.

COLOR SYSTEMS

Black Inks

- **Epic™ Matte Black** is a print black ink that produces a very low gloss surface appearance. Epic Matte Black offers exceptional print qualities for the manual and automatic printer due to its high-productivity, wet-on-wet printing capabilities.

- **Rival Sport™ Black** delivers maximum coverage with the fewest strokes for color consistency when printing directly onto dark fabric or over an underbase.

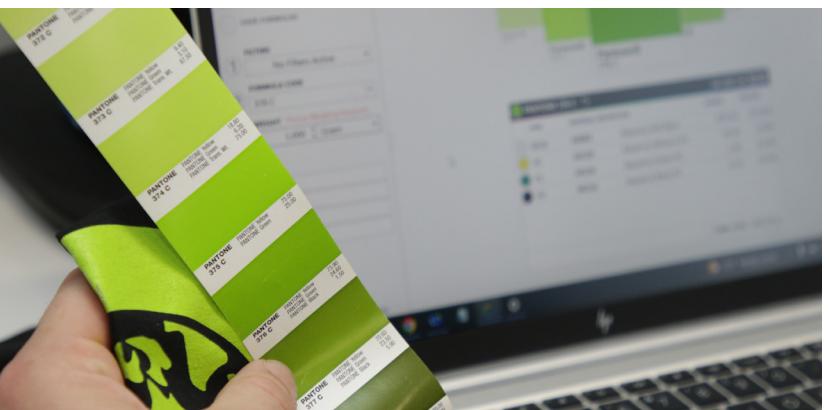
- **Rio™ RFU Black Diamond** is a flexible cure ink that offers superior opacity and wet-on-wet printing capabilities. Screen printers can achieve color quickly, even when using fine mesh screens.

- **One-Step Nylon Black** is created for printing on untreated nylon substances. Standard plastisol ink processes are recommended for this high opacity ink.

Standard Colors

- **Rio™ RFU Colors** offer a range of popular industry colors formulated to be vibrant, bold, and pure in color. Each color is optimized for unmatched quality and printability in a ready-for-use format. Rio RFU Colors are flexible cure and suitable for manual and automatic press.

- **Rival Sport™ Colors** are low bleed and flexible cure colors that deliver maximum coverage when printing directly onto dark fabric or over an underbase. Rival Sport offers superior on-press performance and exceptional print results.



Mixing Systems

- **Epic™ MX Color Mixing System** is an easy-to-mix color mixing with 17 translucent to semi-opaque intermixable colors. These Pantone®-simulated colors are developed for high production with a matte finish.

- **Epic™ PC Express Color Mixing System** is an easy-to-use color mixing system with 15 intermixable pigment concentrates and a variety of mixing bases. Epic PC Express Color Mixing System enables printers to produce versatile Pantone® simulations for high production jobs.

- **Epic™ Equalizer Color Mixing System** is an easy-printing color mixing system with 15 intermixable colorants and a base. The Epic Equalizer Color Mixing System allows printers to produce Pantone® simulations for high production projects.

- **Rio™ Mix** is a low cure finished ink mixing system formulated for an optimal balance of color accuracy and opacity. With 18 intermixable colors that enable printers to produce accurate Pantone® simulations, Rio Mix is the most opaque color system in the line of Wilflex mixing color systems.



Flexible Cure Inks

- **Rio RFU Colors, Rival Sport Colors, Epic PC Express Color Mixing System, Epic Equalizer Color Mixing System, Rio Mix, Rival Sport Black, Rio RFU Black Diamond, and One-Step Nylon Black** are classified as flexible cure standard color inks due to their reduced energy use capabilities.

PRINT GALLERY



Wilflex mixing inks are available for use on IMS 3.0, a proprietary color formulation software from Avient Specialty Inks. IMS manages daily maneuvers in a highly functional ink room by providing color management and communication agility, offering tools for color creation and standardizing.

Sustainability Spotlight



Reduced Energy Use

COLOR SYSTEMS

Category	Black Inks				Standard Colors		Mixing Systems			
Product Name	Epic Matte Black	 Rival Sport Black	 Rio RFU Black Diamond	 One-Step Nylon Black	 Rio RFU Colors	 Rival Sport Colors	Epic MX Mixing System	 Epic PC Express Color Mixing System	 Epic Equalizer Mixing System	 Rio Mix
Plastisol Type	Standard cure	Flexible cure	Flexible cure	Flexible cure	Flexible cure	Flexible cure	Standard cure	Flexible cure	Flexible cure	Flexible cure
Colors	Black	Black	Black	Black	32 colors	22 colors	15 colors	15 colors	15 colors	18 colors
Recommended Substrates										
Cotton	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Cotton/Polyeseter	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
100% Polyester	Yes	Yes	Yes*	No	Yes*	Yes	No	Yes	Yes	Yes*
100% Untreated Nylon	No	Yes	No	Yes**	No	Yes	No	Yes	No	No
Nonwoven Polypropylene Bags	No	Yes	No	No	No	Yes	No	Yes	No	No
Properties & Performance										
Opacity	Good*	Good	Best	Better	Best	Better	Good	Better	Better	Best
Bleed Resistance	N/A	N/A	N/A	N/A	N/A	Best	N/A	Best	N/A	N/A
Hand	Better	Good	Best	Best	Best	Good	Best	Best	Better	Best
Wet-on-Wet Capability	Not recommended	Not recommended	Better	N/A	Better	Not recommended	Best	Best	Best	Better****
Application										
Mesh	86–305 t/in (34–120 t/cm)	86–230 t/in (34–90 t/cm)	110–305 t/in (43–120 t/cm)	86–230 t/in (34–91 t/cm)	110–305 t/in (43–120 t/cm)	86–230 t/in (34–90 t/cm)	110–305 t/in (43–120 t/cm)	110–305 t/in (43–120 t/cm)	110–305 t/in (43–120 t/cm)	110–305 t/in (43–120 t/cm)
Flash	160°F (70°C)	180°F (83°C)	180°F (83°C)	180°F (83°C)	180°F (83°C)	180°F (83°C)	220°F (105°C)	See base specifications	See base specifications	180°F (83°C)
Stencil	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Cure Temperature	320°F (160°C)	250°F–300°F (121°C–148°C)	266°F–320°F (130°C–160°C)	280°F (138°C)	266°F–320°F (130°C–160°C)	250°F–300°F (121°C–148°C)	320°F (160°C)	See base specifications	See base specifications	266°F–320°F (130°C–160°C)
Wash	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant	Standard plastisol cleaners, press wash, or ink degredant
Additives										
Viscosity Reducer	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight
Bonding Agent	ASI Hugger Catalyst, 10% by weight	Not recommended	Not recommended	Not recommended	Not recommended	Not recommended	Not recommended	Not recommended	Not recommended	Not recommended
Extender	ASI Finesse, 10% max by weight***	Fashion Soft Base	Fashion Soft Base	Not recommended	Fashion Soft Base	Fashion Soft Base	ASI Finesse, 10% max by weight***	Fashion Soft Base	Fashion Soft Base	Fashion Soft Base

* For one-hit opacity through coarse meshes, use a coating procedure that builds a thick, even stencil to ensure a good column height of ink.

** For bleed resistance, use an underbase white such as Quick White, Polywhite Xtra, LC Xtra, or Athletic Poly White.

*** Refer to properties of selected base.

**** Use 230 mesh or higher for best wet-on-wet printing.

BASES AND OTHERS

Mixing Bases

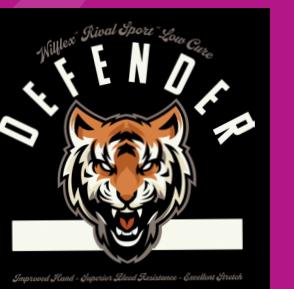
- **Mixing Base** is a high-productivity base for Epic PC and Epic Equalizer mixing systems. Mixing Base offers exceptional print qualities for both manual and automatic prints.
- **Amazing Base** is developed for manual and automatic screen printing with design versatility and press performance. Amazing Base has been engineered to produce optimal color vibrancy and printability.
- **TFX Base** is used to create a soft-feel, hot-split transfer that gives the appearance of a direct print. Properly formulated colors will produce opaque prints on dark fabrics, without under-basing. TFX inks are created for fine line detail, solid spot color printing applications, and conventional cold-peel transfers.
- **LC Base** is created for manual and automatic screen printing with consistent color reproduction, excellent graphic durability, and efficient wet-on-wet application.
- **Rival Sport™ LC Base** is a low bleed, flexible cure mixing base for both manual and automatic printers. Combine a low bleed color system with the Rival Sport White for additional bleed protection.
- **One-Step Nylon Base** is created for printing on untreated nylon substances. Standard plastisol ink processes are recommended for this high opacity ink.
- **Fashion Soft Base** is low cure, low viscosity plastisol base that simulates water-based ink printing and produces an ultra-soft hand feel. Fashion Soft can be mixed with colors or whites to soften the hand.
- **Revive™ Bio Plastisol™ Mixing Base** offers excellent wash durability and opacity. Revive Bio Plastisol Mixing Base is created with over 50% bio-derived content and is certified to ASTM D6866.

Bleed Blockers

- **Rival Sport™ LC Defender** is a bleed blocker created for maximum bleed resistance and opacity. For even further protection against dye bleed, use LC Defender as an overprint with Rival Sport LC White and Colors.
- **Epic™ UBG** is bleed-resistant underbase developed to prevent dye migration, while maintaining good printability and coverage.

Flexible Cure Inks

- **LC Base, Rival Sport LC Base, Rival Sport LC Defender, LC Base, One-Step Nylon Base, and Fashion Soft** are classified as flexible cure mixing bases and bleed blockers due to their reduced energy use capabilities.



PRINT GALLERY



Bio Plastisol™ Inks

- **Revive Bio Plastisol Mixing Base** is created with bio-derived content, classifying it as a Bio Plastisol ink.



Sustainability Spotlight



Biopolymers



Reduced Energy Use

BASES AND OTHERS

MIXING BASES												BLEED BLOCKERS		OTHERS
Category	Mixing Base	Amazing Base	TFX Base	LC Base	Rival Sport LC Base	One-Step Nylon Base	Revive Bio Plastisol Mixing Base	Rival Sport LC Defender	Epic UBG	Fashion Soft Base				
Product Name	Mixing Base	Amazing Base	TFX Base	LC Base	Rival Sport LC Base	One-Step Nylon Base	Revive Bio Plastisol Mixing Base	Rival Sport LC Defender	Epic UBG	Fashion Soft Base				
Plastisol Type	Standard cure	Standard cure	Standard cure	Flexible cure	Flexible cure	Flexible cure	Standard cure	Flexible cure	Standard cure	Flexible cure				
Colors	N/A	Gray	Gray	N/A										
RECOMMENDED SUBSTRATES														
Cotton	Yes	Yes	Yes	Yes	No	No	Yes	No	No	Yes				
Cotton/Polyeseter	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes				
100% Polyester	No	No	No	No	Yes	No	No	Yes	Yes	No				
100% Untreated Nylon	No	No	No	No	No	Yes**	No	No	No	No				
Nonwoven Polypropylene Bags	No													
PROPERTIES & PERFORMANCE														
Opacity	Better	Better	Good	Good	Better	Better	Better	Best	Better	N/A				
Bleed Resistance	N/A	N/A	N/A	N/A	Better	N/A	N/A	Best	Best	N/A				
Hand	Better	Best	Best	Good	Good	Best	Best	Good	Good	Best				
Wet-on-Wet Capability	Better	Best	Not recommended	Better	Not recommended	N/A	Best	Not recommended	Not recommended	Better				
APPLICATION														
Mesh	86–305 t/in (34–120 t/cm)	86–305 t/in	86–125 t/in (34–49 t/cm)	86–305 t/in (34–120 t/cm)	86–230 t/in (34–90 t/cm)	86–230 t/in (34–91 t/cm)	86–305 t/in	86–160 t/in (34–62 t/cm)	86–160 t/in (34–62 t/cm)	230–305 t/in (91–120 t/cm)				
Flash	220°F (105°C)	220°F (105°C)	160°F (70°C)	180°F (83°C)	180°F (83°C)	180°F (83°C)	220°F (105°C)	150°F (66°C)	180°F (83°C)	180°F (83°C)				
Stencil	Direct													
Cure Temperature	320°F (160°C)	300°F (149°C)	300°F (160°C)	270°F (132°C)	250°F–300°F (121°C–148°C)	280°F (138°C)	320°F (160°C)	250°F–300°F (121°C–148°C)	320°F (160°C)	270°F–320°F (132°C–160°C)				
Wash	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant	Standard plastisol cleaners, press wash, or ink degradant				
ADDITIVES														
Viscosity Reducer	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	Not recommended	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	ASI Viscosity Buster, 1–3% per weight	Not recommended	1% per weight maximum	ASI Viscosity Buster, 1–3% per weight	Not recommended				
Bonding Agent	Not recommended	Not recommended	Not recommended	ASI Hugger Catalyst, 10% by weight	Not recommended	ASI Hugger Catalyst, 10% by weight								
Extender	ASI Finesse, 10% max by weight***	ASI Finesse, 10% max by weight***	ASI Finesse, 10% max by weight***	Fashion Soft Base	Fashion Soft Base	Not recommended	Not recommended	Not recommended	ASI Finesse, 10% max by weight***	Fashion Soft Base				

* When printing on 100% polyester, cure at 270°F (132°C) and pre-test for bleed resistance.

** Not suitable for all nylon substrates, pre-test prior to production.

*** Adding extender to any product will reduce opacity and performance.

