

# SunPromo™ REV™ Technical Data Sheet

SunPromo REV is a fast curing, multi-purpose UV ink system for use on a wide range of substrates.

## typical characteristics and features

SunPromo REV inks are formulated to have the following properties:

- Outdoor durability
- Optimized for use on in-line presses
- Can be used with Sun Chemical's ink dispensing equipment and formulator scales

## technical information and handling

### Process colors

The following three (3) sets of SunPromo REV 4-color process inks are available:

- SunPromo REV process colors matched to SWOP standards
- SunPromo REV process colors matched to EURO standards
- SunPromo REV high density process colors
- SunPromo REV S-171 can be used as the process black for SWOP, EURO and high density process colors
- SunPromo REV-TPS transparent base may be used to adjust the density of all three sets of process colors

The special rheology of SunPromo REV process colors were designed with "LDP" technology, featuring low dot profile and minimal friction drag, maintaining optimum color balance with negligible shift throughout the print run. As with all UV halftone printing, plain weave mesh counts and thin stencil coatings should be used to minimize ink deposit and dot gain.

### Screen mesh

Recommended screen mesh of 355 – 420 square inches (140 – 165 centimeters) monofilament polyester mesh or finer, is suitable for processing. It is possible to use coarser fabrics; however the curing parameters must be adjusted for cross-linking of the increased ink film deposit.

### Squeegee

Sharp urethane squeegee of approximately 75 – 85 durometer is recommended.

### Pigments and lightfastness

For applications that require additional flexibility, and/or increased outdoor durability or maximum resistance to edge curl on pressure sensitive vinyl substrates, the recommended series is SunPromo FLX.

Product Code	Description	SAP Number
SunPromo REV-130	SunMatch - Primrose	90033685
SunPromo REV-150	SunMatch - Golden Yellow	90033687
SunPromo REV-050	SunMatch - Orange	90033661
SunPromo REV-R20	SunMatch - Scarlet	90033663
SunPromo REV-R50	SunMatch - Red	90033665
SunPromo REV-M50	SunMatch - Magenta	90033655
SunPromo REV-V50	SunMatch - Violet	90033679
SunPromo REV-B50	SunMatch - Blue	90033638
SunPromo REV-G50	SunMatch - Green	90033654
SunPromo REV-N50	SunMatch - Blending Black	90033656
SunPromo REV-W50	SunMatch - Blending White	90033681
SunPromo REV-E50	SunMatch - Mixing Clear	90033651
SunPromo REV-S131	SWOP Process Yellow	90033674
SunPromo REV-S135	SWOP Process Cyan	90033676
SunPromo REV-S140	SWOP Process Magenta	90033677
SunPromo REV-S171	SWOP Process Black	90033672
SunPromo REV-TPS	Short-flow Transparent Base	90033678
SunPromo REV-S231	High Density Process Yellow	90033666
SunPromo REV-S235	High Density Process Cyan	91118573
SunPromo REV-S240	High Density Process Magenta	91118573
SunPromo REV-N70	Opaque Black	90033659
SunPromo REV-W70	Opaque White	90033683
SunPromo REV-C50	Opaque Clear	90033640
SunPromo REV-E180	EURO Process Yellow	90033648
SunPromo REV-E181	EURO Process Magenta	90033649
SunPromo REV-E182	EURO Process Cyan	90033650
SunPromo ST-341	Surface Hardener	90020047
SunPromo ST-350	Viscosity Modifier	90020049
SunPromo ST-370	Cure Accelerator	90020063
SunPromo ST-373	Adhesion Promoter	90020065

Note: In accordance with information received from suppliers, the full REV series is formulated without heavy metals and complies with: 16 CFR, Part 1303; ANSI Z66, 1-1964; ASTM F 963; CONEG packaging regulations; EC Packaging Waste Directive EC/94/62; EN71m section 3; RoHS 2002/95/EC; WEEE 2002/96/EC; E2003/11/EC.

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## Curing

Generally, a typical 10 – 12 micron deposit of SunPromo REV color is achieved with a 380 square inches (150 centimeters) mesh will require UV exposure of approximately 200 – 300 Joules / centimeters squared, as measured with an IL390 international light radiometer. Opaque blacks and whites will require significantly more irradiation to successfully cure. Actual cure speeds will vary, depending on ink color, mesh, ink film deposit, opacity, number of color components (in a color blend), and type of UV lamps, in addition to a wide range of other processing parameters. Belt speeds of 60 – 80 feet per minute (18 – 24 miles per minute), with two lamps at 200 watts per inches.

Ink adhesion can only be achieved if the UV ink film is adequately cured. Substrates have differing receptivity to UV ink, and on certain rigid and/or colored materials it may be necessary to cure ink more effectively to achieve needed adhesion.

Note: When producing double-side prints, special care must be taken to fully cure the ink film, and minimize print temperature before stacking prints, to prevent marring.

## Modification

SunPromo REV is a single package ink which does not require the use of any additives under normal printing conditions. The following additives are available for modification.

- ST-341 surface hardener 5 – 10% and should not be added if flexibility is a critical requirement.
- ST-350 viscosity modifier 3 – 10%
- ST-370 cure accelerator 1 – 5%
- ST-373 adhesion promoter 3% improves adhesion and water resistance properties, once added uncured ink remains active for 24 hours. After 24 hours, unused ink should be discarded.

## Metallic inks

Most aluminum and bronze pigments can be used with SunPromo REV-E50 mixing clear to produce ink with metallic appearance. Typical levels by weight are 15 – 20% use bronze paste for gold colors and 5 – 10% aluminum paste for silver colors.

Note: It is recommended to pretest all metallic blends prior to use in production.

## substrates

SunPromo REV inks are recommended for:

- Corona-treated polyethylene banner material\*
- Styrene
- Treated or top-coated mylar / polyester
- Corona-treated coroplast
- Corona-treated high density polyethylene
- Coated paper and board
- Rigid vinyl
- Pressure sensitive vinyl
- ABS
- Polyethylene terephthalate (PETG)
- Acrylic
- Polycarbonate,
- Anodized aluminum and some coated metals\*

\*Note: Pretest all substrates prior to use in production.

## coverage

SunPromo REV inks when printed through a 380 / inch (150 / cm) plain-weave mesh, covers approximately 3000 foot squared / gallon, depending on printing variables. Higher coverage can be achieved when finer mesh counts are used.

## storage considerations

If SunPromo REV inks are stored in temperatures between 40° – 90°F (5 – 32°C), these coatings have a shelf-life of twenty-four (24) months.

## safety, health and environment

SunPromo REV inks should be used in accordance with normal standards of industrial hygiene and good manufacturing practice. Please refer to the supplied Material Safety Data Sheet for specific information. Material Safety Data Sheets will be supplied.

Printing inks, coatings and printing residues should be disposed of in accordance with local and national regulations.

The information contained in this technical data sheet is only a recommendation and may need to be altered to suit the conditions and efficiency of the equipment employed. Our products are not designed for use in conjunction with those of any other ink maker or similar supplier unless agreed to in writing.

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