# ImageMark XR

ImageMark XR is a curable screen printing ink formulated specifically for multiple substrate adhesion performance. XR is the broadest ink system of its type, applications with the unique versatility to adhere to nearly all point of purchase stocks, including HDPE and fluted polyolefin stocks without the addition of catalyst.

## Performance Properties

- Durable, non-block finish for double-sided prints
- Flexible for multi-layer applications/die-cutting
- Good water resistance
- Low tack finish for easy handling
- No additives required for Coroplast®
- N-VP and heavy metal free
- Outstanding adhesion to a variety of substrates
- Rapid cure rates, ideal for multi-color presses

## Recommended Substrates

- ABS
- Anodized Aluminum
- Board Stock
- Coated paper
- Expanded Foam PVC (Sintra®, Celtec®)
- Fluted Polyolefin's*
- Many Coated Metals
- Polycarbonate (Adhesive not Recommended)
- Polyethylene Sheet*
- Polystyrene
- Pressure Sensitive Vinyl
- Rigid Vinyl

## Curing/Processing Guidelines

Ink will cure well when printed through 355 (140cm) plain weave polyester mesh or finer. XR's optimal cure window of 125 - 175 mJ/ to a minimum of 550mW, is generally achieved with one 200 watt per inch mercury vapor lamp at a belt speed of 65 - 75 feet per minute (19 - 23m/min). This should provide thorough cure of the product. Cure speeds may vary as thicker material and dark surface colors require more energy. Adhesion should be a minimum of 95% from curing unit with final adhesion developing within six hours of initial polymerization. Coarser fabrics can be utilized, however, cure parameters may need to be adjusted for increased ink film. If a loss of gloss or adhesion due to insufficient cure in noticed, the use of 5 – 10% XR Mixing/Overprint Clear will increase light penetration and improve cure.

## Light Fastness

At full strength and cured properly, XR colors are formulated to withstand up to two years of exterior exposure with clear. (will chalk after 1 year). Factors that will alter the outdoor durability of the ink include but are not limited to: substrate grade/age, poor cure of the ink film, formulas, directional positioning, ink film deposit, exposure to excessive abrasives and air pollutants.

Care should be taken when reducing the mass tone* colors with clear or tinting white as this could negatively affect the exterior durability of the color. Colors that should not be used for outdoor applications are: CMS 164 BS Red, CMS 114 Orange, 180 Warm Red and 131 Brilliant Orange. Automotive grade color alternative recommendations are available by calling our Technical Services Department.

*Mass tone: the full product color without dilution.

ROLLER COATING

- 20047 SP XR RC Solarshield Clear

SCREEN

- 11402 SP XR Solarshield Overprint Clear

## Printing

Mix well prior to use. While supplied in press ready condition, GP may be reduced up to 7% with #11337 Thinner. Care should be taken to print the ink at optimal temperature 70 - 90° F (21 - 27° C). Cool ink will heavier viscosity and will not flow properly. Hot ink will be lower in viscosity resulting in poor definition and decreased opacity.

## Coverage

3,200 to 3,600 square feet per gallon based on ink deposit .40 - .60 mil dependant on color and printing conditions.

## Storage

Care should be taken to store ink in tightly closed containers located in a cool (60-80°F/15-27°C) dark place. After long production runs excess ink from the screen should be properly disposed. With suitable conditions, unopened ink is expected to have a shelf life of approximately twelve (12) months from date of manufacturer.

## Metallic's

Use the Metallic Mixing Clear to prepare metallic ink as its increase viscosity helps insure a good particle suspension.

## Recommended mixing ratios, by weight are:

- 28% gold paste
- 12% silver paste

For optimum coverage and opacity, 280-305 (110 - 120cm) plain weave mesh. Use XR Overprint Clear for extended weatherability and to improve the non-tarnishing properties of the product.

## Additives

- 11337 Thinner - Use up to 7% as needed
- 1534 Adhesion Promoter up to 3% as needed
- 11939 Adhesion Promoter, 3% as needed
- 2980 Catalyst, 3% as needed (will gel in 4 hours)

## Precautions

Read the material safety data sheet prior to processing. It contains instructions for precautions to be taken when handling inks. If ink comes in contact with skin wipe off with a clean, dry cloth (do not use solvent). Wash and rinse the affected areas with soap and water.

## Process Printing



(816) 221-5567

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# ImageMark XR

For superior halftone reproduction, halftones are available in a range of density levels. Additional control of density may be achieved with use of GP HT Base. For best results, use 390 (140cm) or finer and a smooth, thin stencil coating should be utilized with process printing.

| | Press Ready | High Density | Backlit Density |
|---|---|---|---|
| XR Halftone Yellow | 0.90 | 1.10 | 1.35 |
| XR Halftone Magenta | 1.40 | 1.75 | 2.05 |
| XR Halftone Cyan | 1.40 | 1.80 | 2.20 |
| XR Halftone Black | 1.60 | 2.00 | 2.25 |

## Color Availability

ImageMark XR is available in twenty opaque standard colors. Custom matches, metallic, fluorescent and transparent colors are obtainable upon request.

| | |
|---|---|
| XR-101 Primrose Yellow | XR-210 Ultra Blue |
| XR-111 Lemon Yellow | XR-220 Emerald Green |
| XR-123 Medium Yellow | XR-225 Forest Green |
| XR-131 Brilliant Orange | XR-226 Lime Green |
| XR-135 Vivid Orange | XR-235 Teal |
| XR-141 Fire Red | XR-240 Purple |
| XR-151 Scarlet Red | XR-260 Brown |
| XR-155 Rubine Red | XR-301 Opaque Black |
| XR-160 Rhodamine Red | XR-311 Opaque White |
| XR-180 Warm Red | XR-312 Jet Black |
| XR-190 Process Blue | XR-026 Brilliant White |
| XR-200 Peacock Blue | XR Mixing/Overprint Clear |
| XR-205 Reflex Blue | XR Metallic Mixing Clear |

## Pantone Matching System® Colors

The nine PANTONE® approved Color Matching System (CMS) shades are used to simulate the PANTONE® Color Specifier colors. Formulas were designed for maximum opacity and are available in book or Imaging Color source Software formats

| | |
|---|---|
| XR-064 CMS GS Yellow | XR-066 CMS RS Yellow |
| XR-114 CMS Orange | XR-121 CMS YS Red |
| XR-164 CMS BS Red | XR-165 CMS Magenta |
| XR-127 CMS Violet | XR-230 CMS Blue |
| XR-325 CMS Green | XR Tinting White |
| XR Shading Black | XR Mixing/Overprint Clear |



We strongly recommend a preliminary test of printing and curing on the supports intended to use, in order to ascertain exactly the procedure, the working times and the obtained effect. MIX WELL BEFORE USE. Follow the directions on the package, ask for the safety data sheets and always follow the directions contained therein.

**Important** – Only the correct use of the product will allow satisfactory results. For this reason, closely related to the product supplied, Polymeric must decline all direct and indirect responsibility for the proper or improper use of the product. Make certain that product is right for the desired use, work according to the instructions given in our technical data sheets. Before use contact our Technical Service in case of doubt.

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