

### Suggested Uses:

The QS Series is specially formulated to achieve adhesion to a wide range of acrylic, PETG and styrene requiring heat-bending, router cutting, and thermoforming for the sign and graphics market. This series has excellent durability while maintaining flexibility. Additional substrates include polycarbonate, most rigid and flexible vinyl, static cling vinyl, rigid and flexible treated polyethylene and polypropylene, treated fluted polypropylene and some anodized metals. The QS Series does not contain N-Vinyl-2-Pyrrolidone. **It is the responsibility of the end user to pretest all substrates with Norcote® products prior to production runs.**

### Product Features

- Excellent Adhesion Properties
- Thermoforms and Heat Bends Well
- More Opaque Blacks and Whites
- Outstanding Flexibility
- Excellent Weathering

### Printing Recommendations:

All inks should be thoroughly mixed prior to use. The QS Series is supplied in a print ready condition. If adjustment is needed use the QS Thinner only. Do not exceed additions of 10% by weight.

### Mesh:

Mesh counts of 355 or higher are recommended for opaque colors where a single (1) lamp system is used. Mesh counts of 305 or higher are recommended for opaque colors, where two (2) lamp systems are used. Mesh counts should be selected based upon the end user's ability to cure the ink deposit.

### Stencil:

Direct or capillary emulsions that are UV compatible, with a dry micron thicknesses between 7-10 $\mu$  are recommended. Thicker stencils can be used based upon the ability to cure the increased ink deposit.

### Squeegee:

Sharp 70-90 durometer polyurethane blade or multi-durometer blades can be used. For optimal ink lay down, a sharp 80 durometer blade is recommended.



### Screen Cleaning:

Norcote recommends Press Wash 110 (flash point 113° F), 140 (flash point 140° F) or NSW-824 (flash point 150° F). These products are used for cleaning ink off screens during on press color changes or before storing the screen.

### Cure & Adhesion:

QS Series inks will cure with one 200 watt per inch lamp at belt speeds between 50-90 feet per minute using 355-420 mono-filament polyester mesh. Adhesion should be a minimum of 95% from curing unit with final adhesion occurring within one hour of initial polymerization. Coarser fabrics can be utilized; however, cure parameters may need to be adjusted for the increased ink film. If a loss of gloss or adhesion due to insufficient cure is noticed, the use of 5-10% of QS Series Mixing Clear will increase light penetration and improve cure.

### Coverage:

3,200-3,600 square feet per gallon, based on a film deposit of .40 to .60 mil.

### Precautions:

Gloves and / or barrier cream is recommended when handling UV inks. Safety glasses are suggested, particularly for areas where ink may be splashed. If skin contact occurs, wash affected area with soap and water (do not use solvent or thinners).

### Outdoor Use:

Extensive QUV accelerated weathering tests have been conducted on Fluted Polyethylene, Polyethylene Banner and vinyl films printed with the QS Series. The QS Series withstood 1,000 hours of exposure in a QUV chamber, with 4 hour cycle times of UV light and condensation, with minimal to no changes in color or gloss. Accelerated machine weathering results reference standards and can not precisely reproduce actual outdoor performance.

## Metallic Colors:

The QS 010 Mixing Clear is supplied to use for mixing metallic powders and pastes, such as silver and gold. The increased viscosity of the Metallic Mixing Clear helps to ensure a good powder suspension. Recommended mixing ratios are: 8% by weight of Silver and 20% by weight of Gold. For optimum coverage and opacity, 260-305 meshes are recommended. Use QS Series Overprint Clear for extended weatherability and non-tarnishing properties. Introducing metallic materials into an ink will reduce the shelf life of the ink. Actual shelf life is dependent upon individual users conditions. As a general rule, it is recommended that only enough metallic ink is mixed for one days use (approximately 8 hours). Paste should be stored between 65° F-95° F to avoid solidification. If this occurs, reliquify the product by placing in an area with temperatures of 25° C-35° C.

## Process Colors:

QS four color process colors exceed "SWOP" standards. Variation densities may be achieved with the use of the QS Series 450 Halftone Base. For best results, a plain weave mesh and smooth, thin stencil coating is recommended for four color process printing.

## Fluorescent Colors:

Eight shades of fluorescent colors are available upon request. Fluorescent pigments are not light fast beyond 60-90 days even with the use of an overprint clear. For maximum brightness and color stability, 260-305 mesh counts are recommended. Fluorescent colors are not recommended for outdoor use or in direct sunlight.

## Color Range:

Specific colors can be matched at Norcote® against prints, wet ink or PANTONE® numbers.

## Standard Colors:

QS 101 Primrose Yellow  
QS 111 Lemon Yellow  
QS 114 CMG Orange  
QS 121 CMG Red (YS)  
QS 123 Medium Yellow  
QS 127 CMG Violet  
QS 141 Fire Red  
QS 165 CMG Magenta  
QS 190 Process Blue  
QS 205 Reflex Blue  
QS 230 CMG Blue  
QS 325 CMG Green



## Whites, Blacks & Clears:

QS 010 Mixing Clear \*  
QS 012 Overprint Clear  
QS 301 Opaque Black \*  
QS 311 Opaque White

## Process Colors:

Process Colors:	Density
QS 410 HT Yellow	1.10
QS 420 HT Magenta	1.75
QS 430 HT Cyan	1.80
QS 440 HT Black	2.00
QS 450 HT Base	N/A

## Fluorescent Colors:

Chartreuse  
Orange  
Rocket Red  
Green  
Orange/Yellow  
Orange/Red  
Pink  
Blue

## Metallics:

040 Gold Paste	042 Silver Paste
044 Red Gold Paste	046 Copper Paste
240 Rich Gold Ink	242 Silver Ink

## Storage & Available Warranties

All UV QS Series inks should be stored in tightly closed, black polyethylene containers in an area with the temperature not to exceed 90° F (32.2° C). Do not freeze. Do not store ink below 32° F. Avoid direct sunlight and indirect white light. Excess ink from print runs should be stored in separate containers to avoid contamination and is not covered under any warranty. When stored under these conditions, Norcote warrants the Products shall be free from defects in material and manufacture for a period of one (1) year from the date of sale for the QS Series standard inks, with no additives, and for a period of one (1) month from the date of sale for any custom color containing Day Glo® JZB or T-Powder. **Norcote will not warrant any custom colors containing metallic pastes or any inks intermixed with competitor products.** Any warranties provided will be limited to the price paid for the actual products used which give rise to the warranty claim.

## Testing

Due to the inability of Norcote to anticipate or control the conditions under which the Products and information relating thereto will be used and/or stored, Norcote cannot guarantee the results obtained from using the Products. Any Suggested Uses are merely representative, and because the final product will depend on a number of specific factors, the end user should pretest all substrates with the Products prior to use in production.

\* Used in Nor-Cote's Color Matching Guide