



Suggested Uses:

The RSP Series is recommended for Tag & Label applications on polyethylene, polypropylene, polyolefin blends, styrene, vinyl, papers, and most polyesters. **It is the responsibility of the end user to pretest all substrates with Norcote® products prior to use in production.**

Product Features

- Abrasion Resistant
- Chemical Resistant
- Contains No Solvent
- Opaque
- Good Intercoat Adhesion to Most Label Films
- Quick Curing
- Resistant to Blocking

Printing Recommendations:

All inks should be thoroughly mixed prior to use. Inks are supplied at print ready viscosity for most applications. If adjustment is needed the RSP-070 Thinner or RSP-049 Overprint Clear can be used to thin the ink.

Mesh:

The RSP Series inks print well through rotary screens that deposit 4 to 15 microns of ink film thickness.

Squeegee:

Inks can be printed with durometers ranging from 60-90.

Coverage:

Approximately 2,000 to 2,500 square feet per gallon (189-230 square meters per gallon) depending on printing variables affecting ink film thickness and coverage.

Mixing:

All Norcote® RSP Series colors are intermixable.

Curing Parameters:

Norcote® RSP Series inks cure only when exposed to UV light of the proper wavelength. Curing speeds depend on several factors including ink film thickness and the energy level of the lamps. Ink should be cured immediately after printing.



Curing Equipment:

RSP Series inks are fast curing and work well with one focused 300 watts/in (120 watts/cm) or two 200 watt/in (80 watts/cm) medium pressure mercury vapor lamps. The RSP Series inks will cure up to 125 feet per minute (38 meters per minute) with most focused UV curing units.

Intercoat Adhesion:

RSP Series inks intercoat adhesion is excellent. Although loss of intercoat adhesion is difficult, intercoat adhesion should be monitored throughout the production run especially when using other types of coatings (letterpress, flexo, clear varnishes or foil stamps).

Adhesion:

The RSP Series is a nonvisual post-curing system. Although further cross-linking occurs up to 24 hours later, the RSP Series inks should pass a crosshatch tape test after exiting the curing unit and cooling to room temperature. Maximum chemical and abrasion resistance and adhesion will be attained after 24 hours.

Precautions:

Avoid direct contact of ink with skin and clothing. If contact occurs, wash affected area with warm soapy water and dry thoroughly. If eye contact occurs, irrigate the area with water for 15 minutes and consult a physician. For more specific information, refer to the relevant Material Safety Data Sheet.

Screen Cleaning:

Most conventional solvent cleaners work well. Alcohol based solutions must be avoided as they break down the emulsion. 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. They work well when removing ink from squeegees, flood bars and other equipment. Contact us for packaging options.

Metallic Colors:

Most metallic pigments work well with the RSP-049 Overprint Clear. The ability to cure a suspension is related to pigment load and UV exposure. Select mesh with openings large enough to transfer the metallic pigments of choice; generally a mesh opening of 15 microns is required. Metallic pigments will reduce the shelf life of RSP Series ink mixtures. Recommendation: Mix only enough metallic ink for one day.

- 040 paste should be stored between 18C-35C to avoid solidification. If this occurs, reliquify the paste by placing it in an area with temperatures of 25C-35C.

Specific technical information is provided merely as reference information. Variations in ink deposit, color selection, curing power and substrate will affect the end results. Therefore, Norcote® recommends thorough testing at the actual printing facility prior to production runs.

Color Range:

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



Standard Colors:

| | |
|-------------------------|--------------|
| Opaque White | 1056 |
| Thick White | 1293 |
| Opaque Black | 1019 |
| Thick Opaque Black | 1301 |
| Radiant Yellow | 012 • |
| Medium Yellow | 017 |
| Permanent Orange | 019 • |
| Red | 022 |
| Rhodamine Red | 023 |
| Rose | 024 |
| Magenta | 026 |
| Emerald Green | 030 |
| Spruce Green | 031 |
| Permanent Blue | 034 |
| Violet | 035 |
| Reflex Blue | 037 |
| Peacock Blue | 038 |
| Overprint Clear | 049 |
| Lightfast Yellow | 2313 |
| Lightfast Orange | 2872 |

• **May not be suitable for lightfast applications and is not recommended for prolonged exposure to direct sunlight.**

Process Colors:

| | |
|--------------------------|-----|
| Halftone Base | 060 |
| Halftone Process Cyan | 080 |
| Halftone Process Magenta | 081 |
| Halftone Process Yellow | 082 |
| Halftone Process Black | 083 |

Fluorescent Colors/JZB's:

| | |
|----------------------------|------|
| Aurora Pink (Blue shade) | 11 B |
| Aurora Pink (Yellow shade) | 11 Y |
| Rocket Red | 13 |
| Fire Orange | 14 |
| Blaze Orange | 15 |
| Arc Yellow | 16 |
| Saturn Yellow | 17 |
| Signal Green | 18 |
| Horizon Blue | 19 |
| Corona Magenta | 21 |

Metallics:

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

All RSP colors are 'Special Order', 3 US gallon minimum and 48 hour lead time except the 1019 and 049.

Key Additives

Thoroughly mix all additives both prior to and after addition into base inks. Store additives in a tightly sealed container.

RSP-049 Clear:

Use RSP-049 Clear as an extender base, a curing aid, an interlayer clear, or as a final overprint clear to enhance the graphic effect of printed material. Use of RSP-049 will affect lightfastness if mixed into base colors. Contact the Technical Service Department for more information regarding proper use. Do not exceed additions of 25% by weight.

RSP-060 Thickening Agent:

A thick clear used in the screenprinting of halftone or 4-color process reproductions. RSP-060 may be used to decrease the density of a color in order to match the color key. Additions of 060 will enhance fine line detail or fine copy negative artwork. Additions of 20% or less by weight will correct most variations in color density or print quality.

065-Flow and Bubble Control:

Used to control bubbles which may occur in the wet ink film upon screening. This effect is primarily observed during screenprinting on high gloss surfaces, during high-speed printing, or on certain types of vinyl (where plasticizer conditions may exist). Use of 065 will adversely affect intercoat adhesion; monitor intercoat adhesion throughout the production run. Do not exceed additions of 1.5% by weight.

RSP-070 Thinner:

Enhances transfer of ink through the screen by reducing ink viscosity. Most useful for high-speed printing applications. Excessive amounts of 070 will reduce cure rates and impair surface durability. Do not exceed additions of 10% by weight.

073 Cure Promoter:

Improves depth and speed of cure. Most useful for promoting rapid curing of thick ink deposits, particularly when applied to heat sensitive substrates. The 073 Cure Promoter will increase surface hardness and may increase gloss if curing conditions and production speeds remain unchanged. Mix inks fresh daily. Use of 073 may affect intercoat adhesion; monitor cure and adhesion throughout the production run. Do not exceed additions of 3% by weight.

074 Adhesion Promoter:

The 074 will enhance initial adhesion and adhesion of the inks after multiple passes of some substrates through the curing unit (e.g. polyesters). Shelf life of the inks will be significantly reduced by adding 074. Mix inks containing 074 fresh daily. Do not exceed additions of 1% by weight.

075 Vinyl Adhesion Modifier:

Improves the wetting characteristics of the inks on vinyl substrates; 075 may eliminate the need to wipe the plasticized vinyl prior to printing. The 075 aids in the elimination of bubbles and enhances adhesion regardless of most plasticizer conditions. Vinyl Adhesion Modifier will also increase the cure rate. Use of 075 will reduce the shelf life of the RSP Series inks. Mix only enough ink for one day. Use of 075 will affect weatherability. Do not exceed additions of 5% by weight.

078 PC Adhesion Modifier:

078 was formulated to enhance adhesion and cure rates. The 078 is most useful for accelerating production speeds, particularly when processing heat sensitive substrates that are susceptible to distortion. Do not exceed additions of 5% by weight.

079 PM Adhesion Modifier:

Improves adhesion and cure rates of the RSP Series inks on coated card stock, some metals and other specified materials; most useful for prints requiring die-cutting to a bleed edge. Viscosity will increase slightly when using 079 in the RSP Series inks. 079 will reduce the shelf life and possibly intercoat adhesion. Mix inks containing 079 fresh daily. Do not exceed additions of 2% by weight.

100 Thickening Agent:

Thickens the ink, yet the powder will not dramatically affect gloss. Monitor cure and adhesion of the RSP Series inks when using. Increased ink film thickness may result when printing more viscous inks. Use of 100 Powder will adversely affect weatherability. Do not exceed additions of 2% by weight.

170 Anti-Stat Gel:

Prevents static and fuzzy prints. Anti-stat gel should be added to the ink fresh daily. Intercoat adhesion should be monitored throughout the production run. Do not exceed additions of 12% by weight.



Storage & Available Warranties

All UV RSP 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). 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 RSP 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.

This Technical Bulletin is intended to be used for informational purposes only, and is in no way intended to create any warranties or other obligations on behalf of Norcote. All warranties, terms and/or conditions for a particular product will be specified on the applicable invoice and are only valid upon the creation of a legally-binding contract.

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.

*PVC Plastics:

Decoration can aggravate embrittlement properties of PVC plastics which can lead to cracking and failure of the plastic. It is strongly recommended that the end user contact the polymer manufacturer to obtain information on the suitability for decorating with a UV ink as well as recommendations for molding / processing to reduce this potential. As every situation can not be tested for in a laboratory environment, it is the responsibility of the end user to determine the suitability of the products chosen for an end application.

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