

Polymeric introduces a black toner system for working off U.V. excess and waste inks, to help shops minimize waste and disposal fees.

- Strong enough to handle up to 40% by weight of other U.V. inks while maintaining an opaque, jet black finish.
- Shows good cure and adhesion on various banner stocks including polyethylene and vinyl.
- The Work Off Black is water resistant after a 24 hour post cure on vinyl banner only. If water resistance is needed on polyethylene banner, the 11939 Water Resistance Additive needs to be added at 1% by weight.

### Performance Properties

- Adhesion to a wide variety of substrates
- High hide opacity provides better color trapping
- Low tack finish allows double face painting
- N-VP and heavy metal free
- Suitable for sewing, grommets and die-cutting
- Water and abrasion resistant

### Recommended Substrates

- ABS
- Card Stock and Paper
- Expanded Foam PVC (Sintra®, Celtec®)
- Fluted Polyolefin\* & Treated HD Polyethylene Sheet
- Many Coated Metals
- PETG
- Polycarbonate (adhesive not recommended)
- Polyethylene Banner
- Polystyrene
- Pressure Sensitive Vinyl
- Print Treated Polyester
- Tyvek
- Unsupported Vinyl

\*With the use of Adhesion Promoter (3% 11939), Ultrabond WR will adhere to fluted polyolefins such as Coroplast®. Best adhesion forms after a six (6) hour post cure. The modified ink's shelf life is at least 3 days. This adhesion promoter also provides excellent water resistance. Plastic stock should have a surface treatment level of 40 dyne or higher.

### Curing/Processing Guidelines

Ink will cure well when printed through 355 (140cm) plain weave polyester mesh or finer. WR's optimal cure window of 125 – 160 mJ/550 – 650 mW is generally achieved with one 200 watt per inch mercury vapor lamp at belt speeds between 75 – 100 feet per minute (20 – 30 m/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 four hours of initial polymerization. Coarser fabrics can be utilized; however, cure parameters may need to be adjusted for increased ink film. If loss of gloss or adhesion due to insufficient cure is noticed, the use of 5 – 10% WR Mixing/Overprint Clear will increase light penetration and improve cure.

### Curing/Processing Guidelines (continued)

The WR/FR UltraBond system when properly cured develops an extremely versatile high gloss, water resistant ink film. Even though the cured ink film has been engineered to optimize processing and handling, the printer must assume responsibility for pre-testing and qualifying the parameters for stacking printed parts prior to each run. The intensity of cure, weight or caliper of the material and/or elevated ambient temperatures and humidity of the printing and storage environments will influence block resistance.

Under curing of WR/BF UltraBond can radically affect the physical properties of the inks. Do not expose stacks of printed materials to environments that may introduce high levels of moisture and water. Printed materials must be stored in a dry area. It is also recommended that additional precautions be made for shipping by truck as temperatures in trailers can exceed 160°F, 70°C.

### Light Fastness

UltraBond WR/BF is lightfast up to three (3) years with a 355/inch or coarser mesh. Weathering tests have been completed on 4-mil vinyl printed with the UltraBond WR/FR Series. The ink withstood 1500 hours of exposure with 4-hour cycle times of light and condensation at elevated temperatures with minimal color change and no shrinkage. To maintain a high gloss finish use WR Overprint Clear. Accelerated machine weathering's are reference standards and cannot precisely reproduce actual performance. Based on prior correlation of accelerated testing vs. real time exposure, 500 hours is equated to approximately one year, 45° south Florida. The use of premium grade, calendared vinyl films are recommended for applications intended to weather up to three (3) years.

### Printing

MIX WELL PRIOR TO USE. The 12163 BF Work Off Black must be reduced up to 40% by weight with standard U.V. ink chemistries. If final blend results in top cure, it may be necessary to incorporate 10% of 12023 BR Mixing Clear for improved through cure.

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

3,600 to 3,800 square feet per gallon based on ink deposit .40 - .60 mil dependent on color and printing conditions.



# Ultrabond WR

## #12163 Work Off Black

### 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.

### Additives

- 6494 Thinner up to 10% as needed
- 11939 Adhesion Promoter, 3-5% as needed

### Precautions

Read the 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.

### BLENDING SUGGESTIONS FOR BEST OVERALL JETNESS:

- Combinations of red and green totaling 40%.
- Combinations of red, blue, and yellow totaling 40%.
- Combinations of blue and violet totaling 40%.
- High concentrations of white (> 10% by weight wet ink) will cause gray appearance.

Because of the extreme opacity and numerous mixing possibilities with regards to color and chemistry, it is very important to pre-test by blending a small quantity to check for compatibility and adhesion prior to full scale production to ensure all final requirements are met. Please contact our technical representatives at (800) 746-5567 with any questions.

### Color Availability

ULTRABOND WR is available in Black.

BF-301 Opaque Black

We strongly recommend testing complete construction as per shop conditions prior to full production. **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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