

Technical Data Sheet #294

Revised 09/11/2008

Wet Ink Tack	Tack Free
Maximum Pigment Load	Not to exceed 30%
Printability	Excellent
Surface Appearance	Matte
Opacity/Viscosity	Low/low
Bleed Resistance	None
Fusion Temperature	320°F (160°C) when mixed in the bases
Fusion Time	90 seconds (base dependent) (WB0249 General Purpose Base requires longer cure times, up to 3 minutes depending on your dryer configuration.)
Squeegee Hardness	70-80 durometer
Squeegee Blade	Sharp
Squeegee Angle	45° to screen mesh
Squeegee Speed	Maximum
Underlay	Discharge White or Discharge Base plus up to 6% Agent
Print Stroke	Maximum speed, light pressure
Emulsion	Must use a water resistant emulsion
Mesh Count	86-305 mc. in. (34-120 mc. cm.)
Extender	WB0248 or WB0249 Base
Thinner	Water
Thickener	WB0510 Thickener
Storage	65°F to 100°F (18 to 35°C). Avoid direct sun. Keep lid tightly closed on the container at all times.
Cleanup	Soap and Water
MSDS	#19 (Discharge agent is #20)
Color Range	Pigments and Fluorescents
Substrate Type	100% Cotton
Substrate Color(s)	Lights and *Darks when using Discharge Process

Water Base Ink

WB-99 PS Water Base Pigment Mixing System

Description

- **WB-99 Pigments** are vibrant to give the most brilliant color matches.
- When combined with the WB0249 General Purpose Base, prints with extremely soft feel at a low cost on white fabrics. WB0249 General Purpose Base requires longer cure times, up to 3 minutes depending on your dryer configuration.
- Combine with the WB0248 Quick Cure Base for faster production demands when printing on 100% cotton lights.

Features

- High performance PVC Free Pigment mixing system for 100% cotton light fabrics or dark fabrics when using the discharge process.
- Mix thousands of colors using formulas from the M2007 Ink Mixing software.
- Offers colors that are compatible with the WB Discharge base and WB Discharge White.

Application

Mix colors using the formulations provided in the M2007 Ink Management Software. You may need to upgrade your version of the software to get the WB-99 formulations. Mixed WB-99 PS colors may be printed from 86–305 mc. in. (34–120 mc. cm.) mesh range. The tack free formulation allows increased coverage; therefore, finer mesh counts may be used for softer hand with minimum loss of color brilliance. Mix colors according to the desired color formula for best results.

Note: For better color matches it may be necessary to hold the white out of very dark saturated shades. Colors should be checked through a 156 mc. in. (62 mc. cm.). Colors will be lighter through finer mesh.

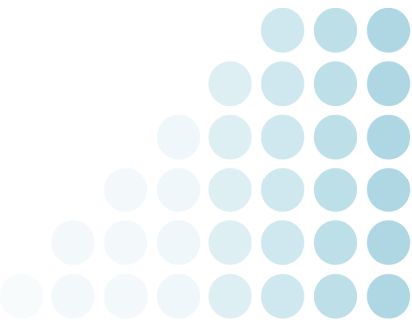
Recommended Printing Techniques

- Image area should be filled with ink.
- Leave image area flooded to prevent drying in the screen.
- For extended non-printing times, mist with a spray of water to prolong wetness of ink.
- Transfer ink to the fabric surface with a light squeegee pass.
- Washing the garment is the best test for complete fusion.

Special Recommendations

- WB-99 pigments will not cure and must be mixed with a base to cure.
- Stir WB-99 PS prior to weighing.
- Keep pail closed when not weighing product.
- WB-99 PS does require "high speed/high shear" mixing to properly disperse the components and additives. We recommend that customers use a shaker mixer, homogenizer, high speed drill with mixing blade, etc. Hand mixing or "turn-about" mixing is not adequate.
- WB-99 inks require a suitable mixing environment to insure mixed products have no cross contamination with other inks. New or properly cleaned utensils, pumps, pails, etc., are required. Utensils should be cleaned with soap and water.

All recommendations and statements made, if any, are based on Rutland's research and experience. However, since Rutland has no control over the conditions of use or storage of the product sold, Rutland cannot guarantee the results obtained through the use of its products. All products are sold and samples given without any representation or warranty, expressed or implied, of fitness for any particular purpose or otherwise, and upon condition that the buyer shall determine the suitability of the product for its own purpose. This applies also where protective rights of third parties are involved. It does not release the user from the obligation to test the suitability of the product for the intended purpose and application.



**Technical Data Sheet #294
(Page 2)**

Water Base Ink

WB-99 PS Water Base Pigment Mixing System

Available Products

WB-99 Mixing Primary Colors

WB1141 PS Violet
WB2411 PS Blue #1
WB2414 PS Blue #2
WB2415 PS Marine
WB3246 PS Green
WB4246 PS Yellow
WB6367 PS Scarlet
WB6364 PS Red
WB8037 PS Black
WB9068 PS White

WB-99 Fluorescent Colors

WB1142 PS Fl Magenta
WB1143 PS Fl Violet
WB4247 PS Fl Lemon
WB6365 PS Fl Red

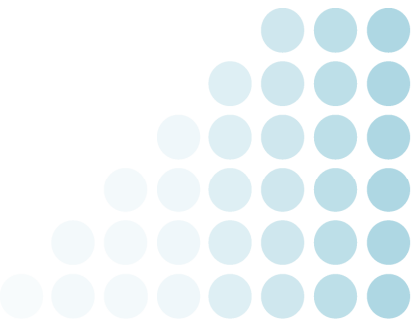
Bases/Modifiers

WB0248 Quick Cure Base
WB0249 General Purpose Base
WB0255 Discharge Base*
WB0257 Penetrant
WB0258 Lubricant
WB0259 Discharge Agent
WB0510 Thickener
WB0510 Discharge White Plus

WB-99 Kit contains: (WB000109)

1 pint each PS Primary Pigments
1 pint each PS Fluorescent Pigments
1 pint extra WB9068 PS White
1 pint WB0257 Penetrant
1 pint WB0258 Lubricant
1 pint WB0259 Discharge Agent
1 Gal WB0248 Quick Cure Base
1 Gal WB0255 Discharge Base

*Must be activated with up to 8% WB0259 Discharge Agent.



Technical Data Sheet #294
(Page 3)

Water Base Ink

WB-99 PS Mixing System Modifiers, Additives, and Bases

WB0510 Thickener – Used at ½ to 1% to increase viscosity of WB-99 ink. This would lead to an increase in opacity.

WB0248 Quick Cure Base – This base is to be used with WB-99 pigments. Mix pigments at up to 30% to create colors.

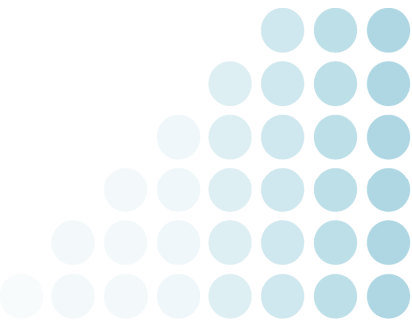
WB0249 General Purpose Base – WB0249 base is used with WB-99 pigments. Mix pigments at up to 30% to create colors. General purpose base will not cure as quickly as the Quick Cure Base so take this into account when adding WB-99 PS pigments. Any mixture made using the General purpose base should be tested prior to production. WB0249 General Purpose base is less expensive than the other bases.

WB0255 Discharge Base – Discharge base is used with pigments. Mix pigments at up to 30% to create dischargeable colors. Test all color mixes for suitability prior to mixing production quantities. User must add 3% to 6% of WB0259 Discharge Agent to activate this base. Only activate enough products to run 3 to 4 hours. The additive should be mixed into the base with a high speed drill and or a homogenizer.

WB9067 Discharge White Plus– Discharge White Plus is used as an underlay to enhance the brilliance of colors where garments are not completely discharging. User must add 3% to 6% of WB0259 Discharge Agent to activate the white. Only activate enough products to run 3 to 4 hours. The additive should be mixed into the base with a high speed drill and or a homogenizer.

WB0259 Discharge Agent – Use from 6% to 8% to activate the WB0255 Discharge Base or the WB9067 Discharge White Plus.

WB0256 Low Crock Binder – This may be added to heavily saturated colors to improve Crock resistance. WB-99 will normally pass industry Crock test standards as is. WB-99 colors will have better crock results after the print ages 24 hours or more. Low Crock Binder would typically be added to other pigment systems when using WB-99 bases. Add up to 10% Low Crock Binder to improve pigment crock test results.



**Technical Data Sheet #294
(Page 4)**

Water Base Ink

125

WB0257 Penetrant – WB0257 is added to WB-99 inks at up to 5% to provide better penetration into certain fabrics thereby giving a softer feel.

WB0258 Lubricant – Add WB0258 at up to 5% to provide more open time of the wet ink to prevent drying in the screens.

WB0270 Foil Resist Additive - Add up to 10% WB0270 to water base ink to provide a barrier for foil. Foil will stick to areas where foil adhesive is applied and resist sticking to areas where the release agent has been added to the water base ink. Do not exceed the recommended usage as it may cause the ink not to cure properly.

Test for cure, wash fastness, and crock before running production quantities.

Storage

Stable for up to 12 months if stored below 100 degrees F. (65 degrees C.) in a **closed container**.

With this technology, evaporation can lead to destabilization of final ink formulation. After opening the container, one must add a small quantity (50-100gm) of water and seal it tightly to avoid evaporation and avoid drying of upper surface.

Disposal

Disposal Method: This material is not hazardous waste in dry form according to TCLP results (EPA method 1311).

If the material is in a liquid form, heat it until solid or simply allow the water to evaporate.

Dispose of the dried material in a safe manner in accordance with federal, state, and local regulations. Do not dispose of by means of sinks, drains, or in the immediate environment.

Empty drums should be completely drained, properly sealed, and returned to a drum reconditioner. Drill a hole in the bottom of empty pails to prevent drowning of small children.

Disclaimer:

The information in this leaflet is given in good faith but without warranty. We recommend that before using our products, the customer should make his own tests to determine the suitability of the products for his own purpose under his operating conditions as the circumstances under which products are stored, handled and used are beyond our control, we cannot assume any responsibility for their use by the customers.