

**Super  
VersaLith  
Formula  
Guide**

**Kerley Ink**

# What is Super VersaLith?

Super VersaLith represents a new concept in inkmaking. Unlike before, when inks were made from hard-to-handle flushes and varnishes, Super VersaLith-based inks are made from the easy-to-use Super VersaLith ink concentrate that's diluted with one of a series of extenders and ink modifiers. Inks made from Super VersaLith ink concentrates enjoy other advantages, too. For instance, did you know that Super VersaLith ink concentrate replaces several types of flushes with one concentrate system? Instead of using heatset flushes for making heatset inks, quickset flushes for making sheetfed lithographic inks, and mineral oil flushes for making newsinks, Super VersaLith can be used to make all of the above types of ink plus business forms inks, too. Thus, you reduce your expensive flush inventory from three types of flush down to only one fast-moving concentrate.

How can so many inks be made from just one concentrate? The answer lies in the quality of the vehicle system and the relatively high strength level of the concentrates. Super VersaLith ink concentrates are made to match the shades of the PANTONE®\* system base colors. The resins used in Super VersaLith's universal vehicle are the most modern, high-tech types available today, guaranteeing high speed setting with or without heat assist.

Super VersaLith has low VOC's, ranging from 16 to 21 percent, depending on the color. Super VersaLith also contains premium vegetable oils. No non-drying soy oil is used to cheapen Super VersaLith. However, Super VersaLith is compatible with both soy oil and petroleum-based mineral oils as will be demonstrated in the following text.

## Making inks with Super VersaLith...

The four basic types of paste ink: heatset, quickset, business forms and newsink, can be made using Super VersaLith ink concentrate. The basic formulas are astoundingly simple: add a certain percent of Super VersaLith and the remainder is usually extender and possibly a small amount of ink modifier and tack adjuster. That's all there is to making ink with Super VersaLith!

## Making "spot" colors with Super VersaLith...

Specially matched colors, called "spot" colors, are very easy to make with Super VersaLith! Since Super VersaLith is balanced to work with the Pantone system, all references to a particular color number will correspond with this system. To make a spot color, simply weigh out the proportion of Super VersaLith base colors that the color selector book calls for, then add the correct amount of letdown varnish or extender to finish the formula. That's all!

## How to make newsinks...

The formula for newsink listed below will make premium very, very low rub newsinks. The formula is patterned after our "Soytab 2 PMX Plus" enhanced-strength newsinks.

<b>Super VersaLith</b>	<b>55</b>
<b>Soytab Extender</b>	<b>33</b>
<b>Soya Oil</b>	<b><u>12</u></b>
<b>Total</b>	<b>100 parts</b>

**tack: Approx. 6 points @ 1200 RPM (Thwing-Albert Model 101)**  
**viscosity: 50-60 poises (depending on color)**

\*Pantone Inc.'s check-standard trademark for color.

## How to make conventional business forms inks...

The formula for forms ink listed below will make no rub non-laser forms inks. The formula is patterned after our "Soytex 3 PLS" series conventional forms inks.

<b>Super VersaLith</b>	<b>60</b>
<b>Soytex Extender</b>	<b>37</b>
<b>Soya Oil</b>	<b>3</b>
<b>Total</b>	<b>100 parts</b>

**tack: Approx. 10-11 points @ 1200 RPM (Thwing-Albert Model 101)**  
**viscosity: 150 poises +/- 25 poises**

## How to make laser-compatible business forms inks...

The formula for forms ink listed below will make no-rub laser forms inks. The formula is patterned after our "Soytex 3 LZR" series laser-compatible forms inks. As always, we *strongly* recommend that all inks to be used in a laser printer be allowed at least 72 hours dry time with adequate wind-  
age, and not be shrink-wrapped after impression.

<b>Super VersaLith</b>	<b>60</b>
<b>Soytex Extender LZR</b>	<b>34</b>
<b>Linseed Oil (ARLO) or Tung Oil</b>	<b>6</b>
<b>Total</b>	<b>100 parts</b>

**tack: Approx. 11 points @ 1200 RPM (Thwing-Albert Model 101)**  
**viscosity: 125-155 poises (depending on color)**

## How to make heatset inks...

The formula below is patterned after our "Nova" series heatset inks for high-speed web presses. PolyMax CQS 50 compound can be used instead of TetraMax for economy.

<b>Super VersaLith</b>	<b>65</b>
<b>UltraBrite 2A Vehicle</b>	<b>26</b>
<b>TetraMax QS 50 PTFE Wax Cpd.</b>	<b>2</b>
<b>47 Solvent (Solvex 465)</b>	<b>7</b>
<b>Total</b>	<b>100 parts</b>

**tack: Approx. 10-11 points @ 1200 RPM (Thwing-Albert Model 101)**  
**viscosity: 100-130 poises (depending on color)**

## How to make sheetfed litho inks...

The formula for sheetfed litho ink listed below will make very fast setting inks similar to our "Speedex" line of stay-open litho inks. The formula is patterned after our "Speedex 4 PRS" series of fast-setting, stay-open sheetfed quickset inks.

<b>Super VersaLith</b>	<b>75</b>
<b>Speedex Extender</b>	<b>23</b>
<b>TetraMax QS 50 PTFE Wax Cpd.</b>	<b>1</b>
<b>PolyMax CQS 50 Wax Cpd.</b>	<b>1</b>
<b>Total</b>	<b>100 parts</b>

**tack: Approx. 15 points @ 1200 RPM (Thwing-Albert Model 101)**  
**viscosity: 270-330 poises (depending on color)**

## How to make tint colors...

Making tint colors with Super VersaLith is quite easy to do. All you will need is the percentage of each base color and tint from the Color Guide. The first step in making a tint is to multiply the recommended percentages of base colors and extender/varnish specified in the Color Guide by the dilution percentage for the type of ink you want to make. Then, add extender to the formula in relation to the strength needed. For instance, if you wanted to make a newsink formula, add 45% more Soytab Extender. Here's an example:

**To make 100 lbs of 345 news green tint...**

**Add to ink tub**

**7.8% Super VersaLith Proc. Blue** *times batch weight (100 lbs) times 55% dilution ratio gives: 4.29 lb*

**4.7% Super VersaLith Proc. Ylw** *times batch weight (100 lbs) times 55% dilution ratio gives: 2.59 lb*

**87.5% Soytab Extender** *times batch weight (100 lbs) times 55% dilution ratio gives: 48.1 lb*

**Subtotal:** 55 lb

**Add extra Soytab Extender to batch (100 lbs desired minus Subtotal) :** +45 lb

**Batch total** 100 lb

## How to adjust tack..

If you have an inkometer, you're already ahead. If you don't, then follow the suggestions below.

**Use Solvex 525 or equivalent for all sheetfed inks. ARLO (linseed oil) is also suitable.**

**Use Solvex 465 or equivalent for all heatset inks.**

**Use Soy oil for newsinks and non-laser business forms inks.**

**Use ARLO for laser forms inks.**

High tack inks need very little solvent/oil to reduce tack. Typically, an ink with a tack of 16 points will need only 2% solvent to reduce tack by 2-3 points. Inks with a tack of only 5-6 points need significantly more solvent to reduce tack. Typically, they may need 3-5% to reduce tack by only one point. Oils tend to be about 33% to 50% less effective at reducing tack than solvent. You may need as much as 3% oil to do the work that only 2% solvent would do. Remember that oils usually do not increase VOC's (Volatile Organic Content) in an ink, but they do retard drying speed.

## Recommended additives...

Sometimes, you might need to modify one of the recommended formulas to make it work or to please a customer who has a special demand of the tint. Kerley makes a line of "Ink Tools" to help you make the ink that's perfect for your customer. All of these items are completely compatible with the Super VersaLith ink system, so you don't have to worry about a thing.

**Here's some of Kerley's Ink Tools:**

**GLO - Use this if you want to reduce tack without destroying viscosity of an ink.**

**BCO - Use BCO (Blown Castor Oil) to reduce water pickup to fight "wash out" of litho inks.**

**Gel Plex - Builds viscosity, not tack. Helps fight scumming, misting, high water pickup.**