

• SLIPS & ENGOBES •
• FROM VAL CUSHING NOTEBOOKS •

EXAMPLES OF WORKING FORMULAS FOR WHITE BASE SLIPS

READ EACH FORMULA DOWN VERTICALLY TO ADD UP TO 100%. These formulas are based on the limits given on the previous page(+ C/04)	C/04		C/4-6-6		C/9-10	
	WHITE SLIP for WET APPL.	WHITE SLIP Afor BISQUE	WHITE SLIP for WET APPL.	WHITE SLIP Afor BISQUE	WHITE SLIP for WET APPL.	WHITE SLIP Afor BISQUE
NON PLASTIC KAOLIN		10	5	5	10	10
PLASTIC KAOLIN	25	5	25	5	25	5
CALCINED KAOLIN		15		15		10
BALL CLAY	35		30		25	
POTASH FELDSPAR			20	25	15	20
(CaCO ₃) WHITING					5	5
(3MgO-4SiO ₂) TALC	5	10				
FRIT #3124	25	25	10	10		5
FLINT	2	20	5	22	15	25
(Na ₂ O-3 B ₂ O ₃) BORAX	5		5		5	
(NaCO ₃) SODA		5		8		5
TIN OXIDE	3					
ZIRCOPIX		10		10		15
TOTAL	100%	100%	100%	100%	100%	100%

A 1/4 of 1%(.25) of a deflocculant, like Calgon or Sodium Silicate, or Darvan, etc. added to the water, before putting in the dry materials, will deflocculate the slip enough to improve the application and make the slip adhere to the clay body better. In this case you should begin with about 40% water with the .25 deflocculant. If the dry material won't go into that amount of water & deflocculant, then add small (drop by drop) amounts of a 50% solution of water and deflocculant, until the slip is fluid, and at the proper consistency. This system will be particularly useful with slips for bone dry and bisque application. A FEW MORE HINTS! If most glazes you use craze when used over the slip, you will probably have to add more flux to the slip (Feldspar or Talc or Frit etc.) If the slip cracks going from wet to dry you probably need to add plastic clay (if you are applying the slip to wet or leather hard clay) or you need to reduce the total clay content and add more calcined clay (if you are applying the slip to bone dry or bisque clay). A thinner application will stop much cracking in the slip, but the best solution is to adjust the formula, as described above. If the slip cracks or crazes during the fire (not in drying) you may need more flint and less flux, or the reverse, depending on the circumstances. The fired crack could be due to excessive fired shrinkage, in which case you reduce the flux content and increase the flint, or the fired crack in the slip could be due to excessive porosity and lack of shrinkage with the clay body, in which case you add more flux and decrease the flint (and possibly some clay). White Base Slips (of the sort shown here) can not generally be used over a glaze, but should be used either under a glaze or unglazed, The use of slip opens up great possibilities for depth and color accents under the glaze.