

Vince Pitelka, 2015

STA Decorating Slip

There are abundant recipes for general-purpose decorating slips, and a popular notion holds that any white porcelain claybody thinned to a slip will work as a base slip for decorating. The caveat is that it depends on the claybody being decorated, the type of application, and the colorants added. For many years we have used recipe that claims to work at all temperatures, but in fact has often been problematic at all temperatures. The recipe below was provided by Shasta Krueger and is used widely at Utah State with good results. It's called STA Slip, which stands for "stick to anything." A ubiquitous high-fire porcelain claybody recipe contains equal parts kaolin, ball clay, potash feldspar, and flint, and that's exactly what this recipe is with a few minor changes. The 2.5% Zircopax helps to give opacity. The substitution of 12.5% nepheline syenite for half of the potash feldspar and the addition of 2.5% 3195 frit should help adhesion at all temperatures.

STA (stick to anything) Decorating Slip

Applied to greenware or thinly to bisqueware

EPK ----- 25

Ball Clay ----- 25

Flint ----- 25

Cornwall Stone ----- 12.5

Neph Sy ----- 12.5

Total ----- 100.0

Plus -

Zircopax – 2.5%

Frit 3195 – 2.5%

Slip Colors from Ceramic Oxides (percentage of dry materials weight)

Tan/Gray ----- 5% Rutile

Light Green ----- 1% Chrome Oxide

Medium Green ----- 4% Chrome Oxide

Dark Green ----- 7% Chrome Oxide

Light Blue-Green ----- 1% Chrome Oxide, 1/2% Cobalt Carbonate

Dark Blue-Green ----- 4% Chrome Oxide, 3% Cobalt Carbonate

Sky-Blue ----- 1/2% Cobalt Carbonate

Medium Blue ----- 2% Cobalt Carbonate

Dark Blue ----- 5% Cobalt Carbonate

Light Brown ----- 3% Red Iron Oxide

Medium Brown ----- 6% Red Iron Oxide

Dark Brown ----- 9% Red Iron Oxide

Black ----- 8% Black Iron Oxide, 5% Manganese Dioxide, 5% Black Cobalt Oxide

*Saturated Iron ----- 25% Red Iron Oxide (thin applications only – see below)

*The saturated iron slip is specifically intended for thin applications on greenware where you want the iron color to come through the glaze. A good example is on white shinos, where this iron slip will come through as a red-brown or brown color. Also, when you want to achieve brush-painted iron brown marks or banding on a glaze, it is better to do the brushwork with saturated iron slip on greenware rather than iron oxide wash on the raw glaze. If applied under the glaze on bisqueware, iron oxide wash can cause glaze-crawling. Overglaze, fresh iron oxide brushwork is so easily smeared while handling the ware before firing. Using the saturated iron slip on greenware eliminates both problems.