

WORKSHOP ELECTRIC KILN GLAZES

Lana Wilson 2004

John Conrad's Black Engobe, cone 6 (for cone 04 version see below):

Flint	25
Kaolin	20
Kentucky Ball	20
Potash Feldspar	15
Borax or soda ash	5
Whiting	5
Nepheline Syenite	10
Black Mason stain 6600	10-12 %

1. **For cone 6**, add 20% extra nepheline syentite to make it more vitreous.
2. **For cone 04** charcoal to black engobe: do not add the extra Nepheline syenite, instead add 30% frit 25.

Notes on Altered Conrad: I paint this on a textured white clay surface and then sponge it off to create a black and white effect. If too thick an application is done it will pinhole. For either version make black by adding 10% mason stain 6600.

Purple Pink: cone 6 to 9 electric: Matte, but runs. Not food-safe, I used it for my shower tiles, richer color at cone 8, thick is purple-pink, this is blue or brown, substituting strontium carbonate (so food-safe) creates blue where thick and green where thin. If at cone 6, add 2% lithium carbonate, try thick and thin over Bell Lichen for painterly effect. Acids like vinegar stain this glaze. 50/50 by volume of gerstley borate and rutile painted on top of this glaze yields yellow-lime. Try thick and thin.

Soda Feldspar (Del Monte)	42.3	Barium Carb.	31.5
Flint	8.2	Nickle Oxide	2
Zinc Oxide	18	Bentonite	2

Mackersie Copper, Cone 6: Try two and three coats.

Strontium carbonate	15
Kona Feldspar	60
Dolomite	20
Bentonite	1 or 2
1. copper carbonate	1-3% (2.5% is light green)
2. warm yellow	add 4 to 6% crocus martis
3. classy slightly off white	add 6% rutile

Lana's Brick Red, cone 06 to 04 oxidation: Works well brushed on a flat area or brushed on a textured area and sponged off so that it only stays in the interstitial spaces

Red art	88
Frit 3134	12

Persimmon, cone 6 electric: A cone 6 electric glaze that looks like reduction iron red. Fire to cone 6, then without adding any glaze simply re-fire to cone 06. The cone 06 firing changes the dull brown produced by the cone 6 firing to a rich red. It is better where it is thick, but if it is too thick it will run. THIS WORKS! Try Crocus Martis instead of iron.

Gerstley borate	47	Red iron oxide	10
E.P.K.	23	Soda ash	0.2
Flint	30		

Lana's Purple Aqua cone 04 electric. (Toxic) I put it on much thinner than most glazes and rub a little off with my plastic gloved finger on textured areas and fire to Δ6. Then I generously apply a even thinner mixture and re-fire to cone 04. If I don't get a rich enough purple (o.k. some people call it deep blue) then I apply more very thin watery glaze and lots of it and re-fire.

Nepheline syenite	45
Barium carbonate	45
Frit 626 or 3289	4
Bentonite	2
Copper carbonate	12

Note: thin for purple and thick for aqua.

Glossy Base Black (from Mastering Cone 6 Glazes), cone 6: (Food safe) I have changed the oxides to make a better black with visual texture that doesn't turn brown when I re-fire to cone 04.

Ferro frit 3134	26
Custer feldspar	22
Talc	5
Whiting	4
E.P.K.	17
Silica	26

For black add:

Iron oxide	5
Cobalt oxide	2
Manganese dioxide	2
Chrome	1
Titanium	1.5 (increase this up to 2% for Hare's fur possibilities)

Low Fire Shino Flesh Revised: cone 04: originally from Alfred and too shiny so I cut the Lithium carbonate from 29% down to 9%. First I use John Conrad Black Engobe wiped off and fired to cone 6, then I apply Low Fire Shino Flesh, watery thin consistency, no wiping off and re-fire to cone 04.

Nepheline syenite	70
E.P.K.	11
Lithium carbonate	9
Rutile	6
Maganese dioxide	.5 (very little but it makes all the difference)

Buddah's juice: cone 04: white thin mottled veil effect. Use very thin and watery but let it puddle some on top of a piece it John Conrad's Black Engobe which was fired to cone 6. Brush with Buddah's Juice on and re-fire piece to cone 04. If use green mason stain use a little thicker but never as thick as a regular glaze.

Nepheline syenite	20
E.P.K.	20
Strontium carbonate	36 to 41
Silica	12
Frit 3134	8
Lithium carbonate	6
For green add Mason stain 6236	20%

Bronze Lizard cone 6: From California College of Arts and Crafts (they dropped Crafts from the name), it is bronze with black lichen where really thick, I paint it on:

Manganese dioxide	75
Copper carbonate	3.88
Magnesium carbonate	3.88
E.P.K.	3.88

Lana's Aqua Bronze: Cone 6: Thick application for bronze, thin for aqua. It runs where glaze is thick, so spray thin application near bottom of piece.

Nepheline syenite	50
Strontium Carbonate	50
Add 3% bentonite, 2.5–4.5% gerstley borate and 4% copper carbonate	

Red Chrome: Cone 6: This satin matte glaze seems the best of all the red chrome tin electric glazes. It can run, so don't do too thick an application. Interesting in overlaps with other glazes; nice brushed over areas of Persimmon.

Gerstley borate	21	Flint	32
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Nepheline syenite	16	Tin oxide	5
E.P.K.	11	Whiting	20
Chrome	0.15 (not 15!)		

Dry Borax Engobe: Cone 04 to cone 6: Fire to cone 6 or cone 06 to cover a failure glaze. Then apply a new glaze and fire again. Color with 3% to 10% Mason stains. It is good under a plain glaze at cone 6 or 06. For a speckled surface, add 3% granular rutile. Sometimes this engobe falls off if too thick of an application, so add up to 12% frit 3134. **For an engobe red brown at cone 6 and a bright red at cone 04 add 15% yellow iron oxide and 8% Frit 3134.**

Borax	14
Kaolin	57
Silica	2

Lana's Iron Sulfate Red Brown, cone 04 to 6 electric, I use it at cone 6: Iron sulfate 60 to 90 grams dissolved in 1/2 cup of boiling water then add 2 tablespoons of powdered, not wet form of Dry Borax Engobe below. I paint on one coat of this thin mixture and let it sink into the bisqued piece and dry, and then I paint on a second coat. After the cone 6 firing:

1. Apply John Conrad's Black Engobe cone 04 version and wipe it off and re-fire to cone 04. Results, Charcoal and Black over Red Brown.
2. Or paint on thin but generous application of Purple Aqua on and re-fire to cone 04. Results, Purple and Aqua on top of Red Brown.

Dry borax Engobe

Kaolin	57
Silica	29
Borax	14

Carver Lithium Slip Cone 04: Copper blue sculpture glaze. I use very thin.

E.P.K.	26
Zircopax	22
Custer Feldspar	22
Flint	13
Bentonite	2
Lithium carbonate	15
Copper carbonate	2.5% or for darker brown black 10% Copper carbonate.

Magic Water: I use this instead of slip: 1 gallon water, 3 tablespoons liquid sodium silicate, 1 and 1/2 teaspoons soda ash. Liquid sodium silicate is also call egg keep and is sometimes available at drugstores.

Paper Clay: The best mending for cracks or holes on green or bisque that I have EVER seen is paper clay. I also use paper clay as slip when attaching leather-hard pieces for boxes and drawers.

Use about 1/4 to 1/3 volume of paper linter or toilet paper to 2/3 to 3/4 bone dry clay by volume. Soak the paper and clay overnight in magic water (or plain water). The water should be about one inch above clay and paper. I find mixing with a hand-held mixer (e.g. Braun) is the easiest but a blender also works. Pour off extra water.

I have two jars of paper clay in my studio. One is slip consistency for attaching leather hard pieces. The other jar is a stiffer clay consistency, which I use to stuff in cracks.

Remember: 100 grams of mixed liquid glaze equals about 1/2 cup.