

Pottery

Pottery @ ENTS

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Glaze Recipes

Randy's Clear glaze Recipe

You need about 10kg to fill a 5 gallon bucket. I would suggest you try a test first. I’ve been testing a similar clear base from “mastering cone 6 glazes” ;

Materials	Amt
PPS Fusion Frit F-12	25.00
PPS Feldspar Custer Potash	22.00
PPS EPK	18.00
PPS Silica 295 mesh	26.00
PPS Talc Silverline 303	5.00
PPS Whiting (Calcium Carbonate)	<u>4.00</u>
Total:	100.00

I’ve modified it to change from frit 3134 to f-12 as 3134 may be very difficult to get in the future.

For every 100gm of dry materials start with 85 gm of water.

Date April 1 2024 - Will be setting up a small batch first as Randy suggests.

Processes

Running a test fire

This page is a work in progress.

After some kiln repairs it may be required to run a test fire. Typically this will happen after a relay or element replacement to ensure the kiln is operating normally.

1. Empty the kiln, if not already done.
2. Place a shelf at each zone with pyrometric cones to record temperature.
 - Each set of cones should consist of 1 below target temperature, 1 at target, and 1 above target.
 - No other pieces should be fired.
3. Run the kiln's program normally.
4. Record the runtime and cone behaviour.
5. Compare kiln performance against [Expected performance](#).
6. Make repairs and [Troubleshoot](#) as required.

Kilns

Troubleshooting

Disclaimer

Do not perform troubleshooting without approval from the Board.

Manuals

[Bartlett V6-CF Manual.pdf](#) (Jill - Blue kiln)

Common symptoms for troubleshooting

- Firing duration is weirdly high
- Pieces are being fired inconsistently (some are over-fired, others under-fired, within the same firing)

If you think something is going wrong in the kiln, check the relays first!

Relays

1. Disconnect power from the kiln
2. Note the wiring (take photos)
3. Remove the relays individually, testing them on the bench power supply
 1. 3 terminals will receive power
 2. Connectivity when power is supplied should be present through the remaining sets of terminals
 3. Verify the relay pinouts to be sure on which terminals are used
4. Ensure all spade connections are tightly coupled. It should require fairly significant effort to disconnect the relays. Tighten with pliers as needed.

After replacing needed relays:

1. [Run a test fire](#)
2. At approximately 100 degrees Celsius, do a paper/heat test on each element to confirm operation

Kiln elements

1. Verify that the thermocouples look okay, not damaged, and no pieces or shelves are too close (this could cause a false positive).
2. Disconnect power from the kiln
3. Open the front control panel
4. Note the wiring (take photos)
5. Remove the screw terminal connectors which attach to the elements
6. Using a multimeter, record the resistance of all 6 elements
7. If any of the 6 elements are more than 10% out of spec, replace all elements (values are recorded below)

Replacing elements:

1. TODO

After replacing the elements:

1. [Run a test fire](#)
2. At approximately 100 degrees Celsius, do a paper/heat test on each element to confirm operation

Jill (blue coneart) expected resistance values

Element	Nominal	In spec range
1 (top)	14.2 Ohms	12.78 - 15.62 Ohms
2	17.9 Ohms	16.11 - 19.69 Ohms
3	17.9 Ohms	16.11 - 19.69 Ohms
4	17.9 Ohms	16.11 - 19.69 Ohms
5	17.9 Ohms	16.11 - 19.69 Ohms
6 (bottom)	14.2 Ohms	12.78 - 15.62 Ohms

Kilns

Expected performance

This page is a work in progress.

Each of the kilns has an "expected" runtime and temperature behaviour. These characteristics are recorded below. If the real world values start to drift from these expected values, perform

[Troubleshooting](#).

Jill (blue coneart)

TODO

Jack (red skutt)

TODO