

HOT CLAY ADVICE ON BODIES THAT CRAWL

In certain cases, a glaze will struggle to work with a clay body, the glaze can repel from the body and pull into little islands, this can get worse when fired and will reveal a surface like the image below. This is called crawling.



During our testing we noticed that our Vitraglaze Stoneware Hazel Green and Steel Blue powders will crawl on the Sibelco Black Crank and Smooth Textured Black clay bodies.

This was when the powders were made into a dipping glaze with just water. If you are using either of these glazes with the clay bodies listed, we recommend the following addition to the water.

After testing, we found a little addition of CMC can be used to solve the crawling. CMC is a gum to help slow the drying of the glaze. Dipping glazes normally require faster drying, but on clay bodies like these a glaze high in certain materials (clay, magnesium carbonate, zirconium silicate) will want to dry very fast. Slowing the drying process is one way to get a good glaze fix.

Making the CMC solution

A CMC mix, of 20g to 1 Litre is required. Put 20g of the CMC into a pan, then the water. The CMC will gel and become sticky. Heat it up, not quite to boiling point, then cool. Whilst cooling, stir vigorously to break the CMC into smaller particles. Leave overnight and it will breakdown. Store in a clean, airtight jar as it is organic and could smell in the longer term. CMCs are different, there are many brands of CMC. Some have different strengths,

particle/flake sizes and grades. If you have bought CMC from another supplier, please seek their advice for their best mixing ratio.

Proportion in the glaze mix - 1 kg of powder + 700 ml water + 100ml of CMC mix. Which makes a specific gravity of 1.54. Mix well, for best results use a [no splash glaze mixer](#).

Another option is to use the [Vitraglaze mixing medium](#), it is used to make brush on glazes and other solutions. CMC and a bentonite are its main ingredients, so with this you could take it straight from the bottle.

1kg of Powder, 750 ml of water, 100 ml of the Vitraglaze medium. Which makes a specific gravity of 1.45 and again mix really well using a [no splash glaze mixer](#).

Application to the ware.

When the glaze is thoroughly mixed up, dip the ware into the liquid but do so very quickly. If your ware has to be glazed inside and out, then glaze the inside first then allow to dry. The glaze will work at its best if it's very thinly applied.

Some people advocate heating the ware first, but we found this made little difference.

Firing schedule - With the test samples we did, the clay was bisque fired to 990c degrees on an average 100 degree per hour climb. The glaze firing was, 0-600c degrees at 80 degrees an hour, 600-1220c at 200 degrees an hour, 1220 – 1190c drop, 1190 -1190c 10 mins hold.

A lower bisque temperature of around 900c can be effective and may be worth an experiment.

Thickness of the clay, structure and size will affect firing times, see [Hot clay firing advice](#) for further details.

And finally, be sure to test, do not proceed until you are happy with your sample before using it on your wares. Please feel free to give us feedback on your results and experience.

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