

Crystalline Notes - By Kate Malone

How pots are shaped.

I make my work using a combination of press moulding, coiling, hand building and surface building/modelling. I use T Material clay, which is a pretty white firing body with molochite in. It is fabulous for building large or small scale and very tolerant of multiple firings and uneven thicknesses within the same piece. When crystalline glazing I fire bisc to 1000 degrees centigrade.

My work is inspired by the natural world, and the magic of growth – the Life Force, It seems totally relevant therefore to try to cover my pot surfaces with crystals that grow. The magic of a seed developing to a plant and clay developing to a glazed vessel has parallels that are enchanting.

I find crystalline glazes quite overpowering and seek to form a loud balance between strong forms with this strong surface effect. The glazes can almost be bad taste as they are so glitzy and clever, like 80's disco wallpaper or jazzy wrapping paper. I myself enjoy kitch and aim to sometimes offset crystal bad taste with kitch –thus marrying form and surface. At other times crystals can be gentle and extraordinarily delicate making them a fabulously versatile friend to have in the often difficult glaze department.

Glaze application

I mix very thick. I apply using a variety of brushes. Usually a good coat all over then a second coat keeping away from the base area, then a third coat and further thicker dollops on high points or above areas where I want the glaze to run and pool. I try to create forms that will work with the fluidity of the glaze, create pools for crystals to grow in, and shoulders and round rims and gulleys and valleys for them to slide off and show their trail of movement. Sometimes the glaze dries, cracks and begins to fall off. I move them onto their trays and stilts and try to patch areas back up with more thick wet glaze.

I often use three to six different glazes on one surface and blob and layer them together in a series of patches. These overlap in areas and create other effects. I keep a record of the order in which I apply the different recipes as effects change if the order changes.

My favourite glaze is using a base from Emanuel Coopers' glaze recipe book, I have given it the label 'eCAF 33'. It is a bright clear honey glaze which forms crystals of its own honey colour. You have to look closely to see the crystals as they are very subtle. The same base without the Iron Oxide but with Black Nickel Oxide 1.5 percent gives a slightly browner honey with electric blue metallic crystals if you are lucky. I could survive with just those two for the rest of my life and be happy with that.

Recipee is. Alkaline frit 2962 58 g
Zinc Oxide 23 g

Flint	17 g
Bentonite	2 g
Red Iron Oxide	6 g

Run Off/ tray provision.

I feel I could always do more to prevent the problems that arise after glaze firing. My husband is a ballerina with an angle grinder – thank heavens. These machines frighten me horribly – cutting through solids like butter. It is very nerve racking watching giant delicate pots being turned upside down to have their bottoms levelled and polished with an angle grinder, which are then hand polished with diamond pads. The crystalline glaze is so thoroughly creeping and corrosive, it runs at temperature between the tightest of fits between stilt and piece.

Pieces are always scarred below, I see these marks as part of the process which is so fluid. If the body is revealed or a shallow hole created where the stilt was I usually put a smudge of gold leaf to indicate to the observer that I know that those marks are there and that they are not an unseen blemish.

I always make a tray to correspond with the pot, a disc with edges slightly turned up. It is of the same clay and fired to the same temperatures.

Depending on the piece the stilts vary. If it is a round bottomed pumpkin or gourd form I make a three pronged ‘crown’ for it to sit/balance on. Tailor made to each piece.

Otherwise I have a tin full of bars cut in triangle cross section which I break into three shorter rods from the same bar to form three props of same height for the propping of a flat bottomed piece. I sometimes put bat wash between the two surfaces of piece and prop.

Firing Programme.

I fire bisc to 1000

Then glaze firing is

60 per hour to 180

80 per hour to 300

120 per hour to 600

As fast as poss to temp 1260

Drop as fast as poss to 1100

Hold 10 or so mins

Drop as fast as poss to 1060

Hold for 5 mins

Drop as fast as poss to 1000

Hold for 12 mins

Rise to 1069 as fast as poss

Hold for 10 or so mins

Kiln off.

I do not have a rigid pattern of cooling cycle between 1100 and 1000, I usually play inside these temps.

I find the first ten or so firings from new elements are very much the best. I suppose this is the nice fast temp rise to 1260 not allowing the crystals to slip from the pot onto the collecting tray below.

I have a ten ramp temperature controller.

I only use electric oxidation at present.

Results/ conclusions.

Hummmm. It is a tricky but rewarding business this crystal growing on pots.