



Glaze Guide 2025

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GLAZE SAFETY

The glaze palette at the studio has been developed over time in order to provide our potters with a broad and safe range of glazes that use materials that have minimal impact on the environment.

GLAZE MATERIALS

Manufacturers of glaze materials provide safety data sheets with information about safe use and hazard information. Where a glaze has been mixed at the studio the safety data sheet for the minerals are referenced where possible. Minerals used in the glazes in use at The Clay Yard have been selected to offer minimal hazard and can mostly be used in contact with acidic or alkaline materials. The oxides include the following:

Chrome (III) Cobalt, Copper, Iron, Tin, Manganese and Titanium.

FOOD SAFETY

Variations in glaze combinations and firing temperatures mean that it is very difficult to assure that a glazed surface will not react with foods. It is advisable to conduct a simple food test to check for changes in the glaze chemistry at regular intervals. Slice a lemon in half and leave on the surface for 24 hrs or fill your vessel with vinegar and again leave overnight. Examine the surface for “leaching” of the glaze into the food. Changes in texture and colour of the surface indicates that the glaze is not suitable for use with foods.



It is recommended to hand-wash ceramics to reduce the harsh temperatures and alkaline chemicals used in the dishwasher. Glazes with a crackle effect may be prone to further degradation over time.

SAFE HANDLING

Please wear gloves when handling glazes especially where there may be breaks in the skin.

GLAZING TECHNIQUES

BISQUE FIRING

The first firing programme for your pot is set to slowly climb in temperature ranging between 90C to 100C per hour to a critical temperature of 573C where the crystalline structure of the clay changes and the item is now ceramic. The kiln is set to slowly increase in temperature to reach 1000C. Managing the pace of heating and cooling reduces the stress and strain on the structure and reduces the likelihood of warping and cracking.

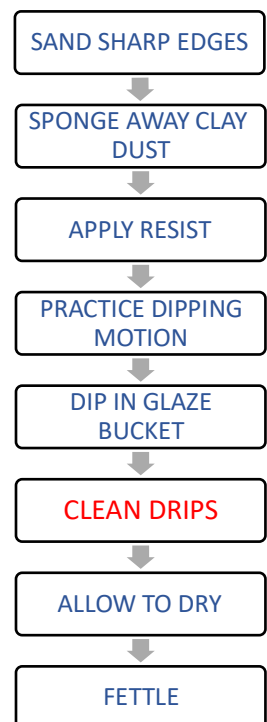
PREPARATION FOR GLAZE FIRING

Planning carefully for the glazing stage will help you enjoy rather than dread this final and important step in the finishing of your work.

Designing and making work that will enable you to enjoy good results should be a key phase in the making process. You may learn through trial and error that good design is not only about the aesthetics but also in enabling you to manage the range of challenges to your work along the way.

Techniques to consider include

- knowledge of the shrinkage behaviours,
- techniques for reducing stress and strain on your work in the firing
- construction that allows you to gracefully and confidently glaze the bisque-fired pot.



DIPPING GLAZES

Ensure that you have planned the glazing of your work carefully giving consideration to protecting your work and the kiln shelves by using a resist (wax or latex) on the surface in contact with the shelf. **Work which is not adequately prepared will not be fired.**

TROUBLESHOOTING

The Clay Yard glaze palette has been compiled to ensure compatibility with the stoneware clay, firing schedules and potter preferences. A variety of glossy, satin and matt glazes produce interesting and surprising outcomes when paired and overlapped with each other producing endless opportunities to produce unique and beautiful glazed work.

Experimentation is encouraged and the use of work to explore is sensible. There are many variables that will affect the outcome of your glazed work;

- Thickness of the pot
- Drying Rate
- Thickness of the glaze
- Firing Rate

A few things to avoid in order to reduce faults and undesired outcomes are as follows.

FINGER-MARKS

Finger-marks can be touched up carefully with a brush. Drips of glaze can be trimmed flat with a knife or diamond-edged fettling tool.

CRAWLING

Some incompatibilities have been observed with certain combinations of clay. The glaze chemistry between two different glazes may produce a runny and gloopy finish which result in damage to the kiln shelf. To avoid crawling:



- ☐ Read and understand the glaze guidelines for each glaze.
- ☐ Discuss best glaze pairings with your tutor.
- ☐ Wax resist up to 1cm from the base.
- ☐ Ensure the glazed pot is dry before firing.
- ☐ Lightly sponge before glazing to remove dust and avoid greasy fingers.

PINHOLES AND BLISTERS

Bubbles and blisters in the glazes may lead to pits appearing on the surface as escaping gases appear. This may be because your bisque-ware is over-damp and the glaze hasn't absorbed fully into the body of the pot. **Fettle** with a diamond-shaped tool once the glaze has dried moving the powdery glaze over the surface.



CRAZING OR CRACKLING

Crazing can appear if the glaze is too small for the clay, as it shrinks cracks will form on the surface and issue a “pinging” sound eventually covering the pot. It can be considered to be a beautiful decorative effect but may impact on the functionality of the pot over time.

Dipping glaze in for longer than the recommended number of seconds may lead to cracks in the finished glaze. When choosing to dip into more than one glaze adjust the dipping times to slightly less, fettle and smooth where possible.

GLAZE PLANNING


Pot	
Glaze (s):	
Technique:	
Expected Outcome:	
Actual Outcome:	
Lessons Learned:	


Pot	
Glaze (s):	
Technique:	
Expected Outcome:	
Actual Outcome:	
Lessons Learned:	


Pot	
Glaze (s):	
Technique:	
Expected Outcome:	
Actual Outcome:	
Lessons Learned:	


Pot	
Glaze (s):	
Technique:	
Expected Outcome:	
Actual Outcome:	
Lessons Learned:	

GLAZE DATA SHEETS


Glaze	A: GLOSSY TRANSPARENT Stoneware 1220°-1260° C
Supplier/ Manufacturer	The Clay Yard, Stephen Moffit recipe
Key Materials	Mix of minerals
Behaviour	Dipping and brush-on. Leaves very few marks which work out in the firing.
Application	Quick dip – in and out.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
<p>Highlights the iron speckles in the clay. Reliable and consistent and recommended for use on surfaces in contact with food. Can be dipped and also painted on with good results.</p> <div>  <p>Take care not to have too thick a layer as it will lose its' transparency and become milky white.</p> </div>	

Glaze	B: GLOSSY WHITE Stoneware 1220°-1260° C
Supplier/ Manufacturer	Tin/Zirconium based opaque glaze
Key Materials	Mix of minerals, nepheline syenite gives the white tones.
Behaviour	Dipping and brush-on. Thicker coat (i.e. longer dip) gives denser colour finish.
Application	2-3 second dip.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
<p>This glaze won't pool to fill in thumb-marks. Speedy and fluid dips will ensure good even results. Nice orange halo with iron in clay where the glaze migrates.</p> <div>  <p>Definitely no short-cuts – use a paint-on resist to give a clean-crisp edge.</p> </div>	

Glaze	C: COBALT BLUE Stoneware 1220°-1260° C
Supplier/ Manufacturer	Donated to the studio.
Key Materials	Contains cobalt oxide.
Behaviour	Very good for dipping, high gloss works well for domestic-ware although recommend testing for food-safety before use with acidic foods.
Application	2-3 second dip.
Safety Advice	Precautionary use of gloves (cobalt). Wash hands to avoid irritation.
Other Useful Information	
 <p>Very runny due to cobalt so leave a good 1cm gap from the base of your pot.</p> <p>Mix well and ensure that you don't hold under for more than 3 seconds.</p>	

Glaze	D COPPER PATINA (Matt Turquoise) Stoneware 1220°-1260° C
Supplier/ Manufacturer	Terracolor 635 initially donated from retired pottery.
Key Materials	Copper Oxide and other minerals. Stir well to pickup turquoise hue as the Copper tends to settle on the bottom.
Behaviour	Matt reactive glaze which falls beautifully into textured surfaces. Variations in the outcome lead to beautiful surprises.
Application	1-4 second dipping for variations in tone from mandarin orange, through turquoise.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation. Not food safe.
Other Useful Information	
 <p>Make use of the orange halo which emerges where the glaze meets the clay surface in planning your glaze. Not for those who like predictable and expected outcomes. Goes well with transparent and transparent for surfaces in contact with food.</p>	

Glaze	E: MATT CREAM Stoneware 1220°-1260° C
Supplier/ Manufacturer	Linda Bloomfield recipe made at the studio – main colourant is Iron Oxide.
Key Materials	Magnesium element gives satin hue, iron oxide brings out a warm cream tone.
Behaviour	Works really well in complement with other turquoise glazes. Some overlaps will also bring surprises.
Application	3 second quick dip. Drips will mainly work themselves out but recommend fettling once dry.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
A clean and reliable glaze. Quite nice for offering a simple cream background to present highly coloured foods such as apples, figs and strawberries. Food Safe.	


Glaze	F: CELADON GREEN (glossy) Stoneware 1220°-1260° C
Supplier/ Manufacturer	Terracolor
Key Materials	Copper Oxide + other minerals.
Behaviour	A reactive glaze that will vary depending on where it falls on your pot and for how long you dip it. Can produce a crackle in thicker parts.
Application	2-4 seconds depending on desired effect.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
<p>Rich green tones which can move to an earthy brown in places. Can crackle which may mean it is not food-safe in the longer term.</p> <div>  <p>Stir well or you will leave behind the key materials that give it colour.</p> </div>	

Glaze	G: NEW BLUE Stoneware 1220°-1260° C
Supplier/ Manufacturer	Recipe shared from Studio 45 potters.
Key Materials	Chromium Oxide and Cobalt Oxide
Behaviour	Mix well before stirring. Has a tendency to clump so occasional deflocculant should be added.
Application	3 second dip straight after stirring.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation. Not food safe.
Other Useful Information	
Has not reacted well when overlapping with some glossy glazes such as white and celadon green. Avoid these pairings. Works well with cream as a pairing and over the top of Amarylis Pink.	

Glaze	H: ALMOND WHITE Stoneware 1220°-1260° C
Supplier/ Manufacturer	Recipe adapted at The Clay Yard from a recipe shared at Studio 45, Dartington.
Key Materials	Titanium Dioxide
Behaviour	A tonal bright white with flecks and crystals that react interestingly with other glazes.
Application	2-3 second dip.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
<p>Reacts interestingly with many combinations – good paring with celadon green. With surprises can come some drips so when double dipping please do so on the rims of vessels.</p>	

Glaze	I: COPPER BROWN (GLOSSY) Stoneware 1220°-1260° C
Supplier/ Manufacturer	Donated by Retired Pottery Studio
Key Materials	Unknown – likely to contain iron and manganese.
Behaviour	A high gloss glaze which is super-consistent and stable. No surprises here.
Application	3 second dip straight after stirring.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
A surprisingly interesting glaze – it aims to emulate a reduction fired glaze such as Tenmoku.	

Glaze	J: AMARYLLIS PINK Stoneware 1220°-1260° C
Supplier/ Manufacturer	Terracolor Stoneware Glaze S632 Amaryllis
Key Materials	Mixture of mineral oxides, metal oxides and inorganic pigments.
Behaviour	Falls away nicely from hard edges giving tone to surfaces. Can react beautifully with other glazes on overlaps. Not recommended for full double-dips.
Application	3 second dip straight after stirring.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation. Not classed as hazardous.
Other Useful Information	
Take caution not to use too much pink especially with other glazes such as white. Major crawling has caused problems for work and kiln furniture when used over and under white glazes.	

Glaze	K:ONYX BLACK GLOSSY Stoneware 1220°-1260° C
Supplier/ Manufacturer	Terracolor
Key Materials	Iron Oxide + Titanium Oxide (Rutile)
Behaviour	Quite a variable glaze that needs a really good mix-up. Named after the camel it should give a warm oaty/brown tone.
Application	3 second dip straight after stirring.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
<div>  <p>If you can, I recommend that you do a test dip and record your behaviours (stirred well, seconds of submersion and where it works best).</p> <p>Avoid disappointment with a rather muddy and mustardy version If not monitored.</p> </div>	

GLAZE DATA SHEET

Glaze	L: FJORD BLUE (GLOSSY) Stoneware 1220°-1260° C
Supplier/ Manufacturer	Terracolour Fjord Blue (donated to the studio)
Key Materials	Cobalt Blue
Behaviour	Flecks of black against deep blue,
Application	2-3 second dip.
Safety Advice	Precautionary use of gloves. Wash hands to avoid irritation.
Other Useful Information	
A consistent and interesting tonal glaze – definitely feels like looking into deep water.	

METAL OXIDES



The metal oxides add a lively depth to your work and bring with it an element of surprise. Apply with a brush as a “wash” and use an old sponge (not your best one) to wipe away the excess. Great where you would like to highlight the textures on the surface of your work.

Copper Oxide will act as a “flux” and will run so please be sparing or use mainly on the tops of your pots. Mainly green, a more dense application produces a chalky black.

Manganese Oxide produces a maroon metallic finish whilst **black iron oxide** is black-brown but will react nicely with titanium base glazes such as Almond White displaying an array of blues and ginger yellows (if you’re lucky).

Red Iron Oxide will produce vibrant reds over a white glaze. **Cobalt Oxide** is available on request. Highly runny and a deep blue it is likely to overwhelm most other colourants. Only really for those who love a traditional blue finish.

UNDERGLAZES

Underglazes are best suited to adding detail to elements of your bisque-fired work. They are very expensive and therefore not freely available for use at the studio. They can be blended to make new colours and the intensity of colour can be built up through layering. For projects that require a large coverage of intense colour it is recommended to use stained slips on leather-hard clay.

For those of you who like to use underglazes on surface decoration I can recommend the [CONTEM underglazes](#) created by CTM. It is sensible to start with a small range of core colours and work to develop your own palette. We have tried and tested these at the studio and their colours are vibrant and bright.

GLAZE PLANNING TEMPLATE

Pot	
Glaze (s):	
Technique:	
Expected Outcome:	
Actual Outcome:	

