



# HOW TO USE CERAMIC STAINS

Ceramic stains are used in preference to oxides because they produce a more stable and predictable results. These versatile stains are suitable for use as a body, slip, underglaze and glaze colourant. These stains produce bright vivid colours under oxidation and reduction firing up to stoneware temperatures but some colours may diminish in brightness above 1250oC so it is recommended that sample firing be done before use.

## UNDERGLAZE APPLICATION

Ceramic Stains should be mixed with a brushing medium to impart some green strength, good flow characteristics and also to act as a suspension agent. The stain should be mixed to a consistency of smooth cream and then applied to either greenware or bisque and allowed to dry before glazing.

Care must be taken to keep the stain application thickness to a minimum. If the stains are applied too thickly, it can peel off during the drying, glazing or firing stages. It is best to practice first on a sheet of paper to get the right decoration and application thickness. Water can also be used as a medium but the application will lack green strength and flow.

If the stain is being applied to greenware and is then to be bisque fired, it is advisable to add 5 to 10% of a clear glaze (flux) maturing at the same temperature as the ware you will be firing. This will assist in the firing strength to the final colourant. If a flux is not added, the stain can tend to “powder” or rub off after the bisque firing, causing smudging and finger marks on the ware.

A body slip can also be used as an addition to these ceramic stains to assist binding, green strength and firing strength. When adding these stains to a slip or powder, it is recommended to place it through a sieve to minimise speckling. Stains can also be brushed on over an unfired glaze to give a softer coloured decoration to your ware. This technique is known as “Majolica”. The stain is mixed with a brushing medium and the colourant then applied onto the glazed but unfired ware, it is then fired in which the stain will melt and fuse into the glaze.

## GLAZE APPLICATION

Stains are a great way to add colour to any glaze. The makeup of a glaze can effect colour development, more so with zinc bearing glazes. It is recommended prior to using the stain in any glaze that a sample testing be conducted first.

To a clear glaze, stain will give a bright vivid colour and to a white glaze it will give pastel shades. Stains can be added to glazes up to about 10% (this percentage is a guide only; more stain may be needed depending on application). When stains are being added to glazes it is best to run the mix through a sieve prior to use, this will minimise speckling of the glaze colourant. It is recommended to use at least a 120 mesh size preferably a 200 mesh.

## COLOURING CLAY

Some ceramic stains are more satisfactory body stains than others. Varying the percentage of a stain added to a body will give varied strength of colour. It is most important that when a stain is added, the body should be sieved to minimise speckling, a 120 mesh size is recommended.

In some cases the addition of the stain will alter the “glaze to body” fit, for example with the cobalt stains; it can affect the fluxing temperature of the body, again it is recommended that a sample testing be conducted.

For best results with colouring clay bodies, it is best to dry out the clay, add the stain by weight, mix up with water to a fluid state, run it through a sieve, a 120 mesh is recommended, then de-water the clay on a plaster batt.

## RECOMMENDED MIXING

Clay Weight	Stain Addition	Percentage
10kg	625gms	8%

## COLOURING SLIP AND ENGOBES

Stains can be blended into prepared slips and engobes. The stain can either be added as a powder and mixed with the engobe or slip thoroughly and then sieved. Slips and engobes can be quite viscous, it is preferable to mix the stain with a small amount of water to form a paste and then add it into the slip or engobe. This way the speckling is kept to a minimum. For best results it is recommended to run it through an 80 or 120 mesh sieve.

## RECOMMENDED MIXING

Slip/Engobe	Stain Addition	Percentage
1Ltr	100gms	8%