

## Printing Ceramics

Greenware, bisque, glazes, tiles, plates, cups bowls - everything can be printed in some form - you just need a suitable ink and printing technique for a clear sharp print.

There are three main techniques used for printing ceramics:

### Printing methods



#### Direct Screen Printing

Placing the screen over the item and screen printing using ink/ oxide directly onto the surface in the desired position.

#### Transfer Printing

Laying a screen over Transfer Paper and screen printing the KERA Underglaze Printing Ink through the screen onto the paper below. This wet design is then 'transferred' from the Transfer Paper onto the ceramic piece (flat or curved).

The EZIscreen Ceramics Printing Kit (code EZI-CERAMIC) has been specifically designed for Transfer printing applications, with easy direct printing also available from the kit.

#### 'Off Contact' Printing

All glazed and non absorbent items, where the ink will sit on top of the surface until fired, must be printed with the screen elevated above the item for a sharp print.

### It's easy to get started



## Direct Screen Printing

Printing directly onto clay slabs, bisque tiles (unlike glazed they absorb the ink), platters, etc. Screen printing Technique is covered in the basic information provided with all systems and available in the Support section of the website.

- Information Sheet #25 details the process of screen printing technique in detail
- Your squeegee should be at approx. 70 degrees and move freely across the screen
- Prints too dark, blurred, smudged or not a clear image = pressure too great and squeegee angle too low. Two lighter passes will provide a sharper result.
- Prints too light, not a clear image = pressure too light, squeegee angle too high or not enough ink on the squeegee

You will receive a sharper and more detailed image printing 2-3 times rather than 1 heavy print. The oxides in the ink can not all pass through the mesh in 1 print so by performing 2 prints you put down a set of 2 sharper layers that stack on top each other and to give a sharp solid print.

#### 1. Keep the angle of the squeegee upright - the angle should be about 60-70 degrees

- Lowering the angle does not put more ink through the screen
- Angles too low may force ink through the screen and bleeding will occur

#### 2. Do not press too hard - less pressure is used with the squeegee when printing

- The blade on the squeegee should not flex or bend whilst printing
- You don't need to push the squeegee through the screen - the ink will naturally be drawn through onto the material below - you just need to guide the squeegee onto the item below

## Transfer Printing

Printing curved surfaces, the insides of bowls, printing plates, cups, teapots, etc is a simple process by placing a copy of the design onto transfer paper, then applying the design onto the item by transferring the ink from the paper to your item - sounds complicated however it's a simple and fast process that can save you hours of copying multiple designs by hand.

Importantly your design is the correct size and in the correct position each time.

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### Printing onto transfer paper



*Continued from page 1 . . .*

Printing the KERA Underglaze Printing Ink directly onto the Transfer paper as per normal Direct Printing Technique (outlined on page 1)

After the design has been screen printed onto the transfer paper, lift the frame to reveal the printed design.

The ink will remain 'wet' and transferable for over 30 mins. Multiple copies of the design may be printed at the same time if more than one copy of the design is to be applied to the same, or multiple pieces of bisque ware.

### Applying the design



1. Cut your design out from the Transfer Paper. Cut close to the design however it's critical that you must leaving a border of 1-2mm.

- Do not cut the design

2. Place your sponge into a dish of water, completely wet the sponge and then wring the water out as tight as possible with only one hand.

- The sponge should be damp but not dripping wet.

3. Wipe your ceramic piece in the area where the design will be applied. This helps the paper to stick and the ink to be transferred

4. Quickly wet your sponge again and then squeeze dry

5. Apply one side/ corner the Transfer Paper, with the printed design, onto the ceramic piece in the desired location

6. Gently rub with your fingers to adhere the glaze to the bisque surface and to form a starting place for the adhering the design

7. Using your sponge, pat the back of the transfer paper whilst gently moving from one side of the design to the other- This 'patting' will release the Transfer Ink from the Transfer Paper to the ceramic piece

### Off Contact/ Elevated/ Snap Printing

When printing glazed and non-absorbent items the ink sits on top of the item after printing until it dries and is fired, where it becomes part of the glaze. It's the non-absorption of the ink that causes problems of smudging/ blurring when the screen is lifted. Direct printing is not suitable.

This process is also called 'snap' or 'elevated' printing

- Information sheet #08 details the process of setting up a screen for off contacting printing in detail

The process involves raising the height of your screen above the item you are printing. The raising of the screen ensures the mesh is not in contact with the item before or after printing and 'snaps' back after the squeegee has passed over the design.

When the screen is not raised you will actually pull a layer of ink back off the item when you lift your screen and the print will smudge.

Raising the screen and 'snapping' back to a height above the item, the screen does not remain in contact with the item, so when it is lifted after printing the mesh is already away from the item and does not stick to the design, leaving all the ink on your item.

A screen printing jig, or jig hinges, makes 'off contact' printing faster, easiest and most importantly accurate as you simply insert a few plastic height adjusters (product code: S-9112) under the frame. The arm of the jig will hold the screen in perfect registration for each print.

### Raise the screen 5-7mm



Jig or hinges recommended

### Use Table Adhesive



A commonly forgotten aspect of 'off contact' is the very important issue of holding your item still/ flat when printing - this is achieved using Table Adhesive under your item when printing.

If you do not use Table Adhesive, although you have raised the height of your screen, the item may lift up and stick to the back of the screen eliminating all the other work you have done.

Table adhesive is an inexpensive and critical part of the process that should not be forgotten. Applied to the board under your print area to hold your item still whilst printing - avoiding movement, smudges, misprints, blurring, etc.

- Apply 1 drop every 7-10cm and spread evenly over your printing board and allow to dry.

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