

Product Information

## What are Color Line Paints \& Pens?



Color Line Paints \& Pens are ready to use enamels for glass or ceramics in a fantastic range of intense colours. Available in handy squeeze bottles which, while ideal for dispensing paint can also be used directly as lining pens.

The firing range is from $700^{\circ} \mathrm{C}$ to $820^{\circ} \mathrm{C}\left(1300^{\circ} \mathrm{F}-1510^{\circ} \mathrm{F}\right)$. All colours have extremely strong pigmentation, are lead-free and freely mixable to obtain further shades.
They are homogenous and smooth in a water friendly medium, environmentally friendly, and easy to use in exactly the required amount ensuring low wastage.

All auxiliary products are also lead-free.

## i MIX YOUR OWN COLOURS !

All Color Line paints mix extremely well together. Mixing only a few drops of one colour into another can dramatically change the mood.

For brightening colours or to give them a more translucid quality, the Color Line Paints can be mixed with Color Line Mix White or Color Line Flux (also see Lab Notes).


## Product Information

## Instructions

## REMOVE SEAL BEFORE USE

All of our paint bottles have been sealed to ensure long shelf life and to prevent spillage during transport.

Unscrew the cap and remove the seal (A).
Make sure that the white foam ring $(B)$ remains inside the cap.


## PAINT PREPARATION

Color Line Pens need to be shaken well - approx. 30 seconds - before use. This ensures that the medium and paint remain homogenous. If the paint appears too thick and you are using it directly from the bottle (i.e. as a pen), add a small amount of Color Line Paint Thinner and shake again vigorously. Water may be added to the paint you are working with. However, the residues of this should not be returned to the original bottle. It can be kept in a separate container for future use, but will have a shortened shelf life.

## PAINT APPLICATION

Now the paint is ready for use. You can apply it in any way you can imagine. Some of the typical application techniques are shown in the section "Techniques", but you can explore many other methods to achieve different results.

For fine line application attach one of the metal tips (C) directly onto the black nozzle and screw it tight. When interrupting the work keep the bottle upside down in a bit of water to keep the nozzle from drying. After use rinse the metal tip thoroughly with water, ideally use a squeeze bottle.


## DRYING

Best firing results are guaranteed if the paint application is evenly and thoroughly dried. You can air dry or dry at a low temperature in your kiln, leaving the vent holes open. The thicker the coat, the longer the drying time.

## FIRING

Recommended firing temperatures are $700^{\circ} \mathrm{C}$ to $820^{\circ} \mathrm{C}\left(1310^{\circ} \mathrm{F}-1500^{\circ} \mathrm{F}\right)$. Fires glossy from $740^{\circ} \mathrm{C}\left(1365^{\circ} \mathrm{F}\right)$ onwards. Up to $650^{\circ} \mathrm{C}\left(1200^{\circ} \mathrm{F}\right)$ keep the kiln ventilated to allow the medium to exhaust. This is especially important for the red colours (more info see section "Lab Notes"). When using the paint between layers, fire the individual layers first separately. Stack or combine the components for a subsequent firing.

- The colours fire true to their unfired appearance with some variation depending on the thickness of the paint layer.
- These paints are compatible with art and float glass COE 85-96 and ceramics.


## SAFETY \& STORAGE

Do not eat, drink or smoke while working with this product. Avoid contact with eyes and do not ingest. This paint is lead free. Food safe when fired. Store in cool and dry conditions.

## The "18 Originals"



## The Creative Series



## Color Line 18 ORIGINALS



This set includes the 18 Originals, 1 Tip Set and 1 empty bottle.

## Product Information

## Auxiliary Products

## COLOR LINE MIX WHITE

Add some of Color Line Mix White to any of the colours for a very strong lightening effect without changing the density of the colour. The addition of Mix White has no effect on the firing temperature.
For more information see the Lab Note in this booklet "Exploring Shades with Mix White".
Available in $62 \mathrm{~g}(2.2 \mathrm{oz})$ and 300 g ( 10.5 oz ) squeeze bottles

## COLOR LINE FLUX

Color Line Paints are basically opaque. Add some of Color Line Flux to any colour or colour mix to add brilliance and translucence. The paint layer is very glossy with a perception of depth. The addition of Color Line Flux does not influence the shade or the firing temperature.
Available in 62 g (2.2oz) and 300 g (10.5oz) squeeze bottles

## COLOR LINE AIRBRUSH MEDIUM

Colour Line Paints \& Pens can be used for airbrushing by adding approx. 35\% Airbrush Medium to obtain the correct consistency. The Airbrush Medium also acts as an adhesive on the glass surface, promoting the drying process and stopping the paint from running. Airbrushing allows the thinnest coat of paint, flawless shading, but can also provide a thick and even paint application on larger areas in a short time.
The addition of Airbrush Medium does not influence the colour or the firing temperature.
Available in 300 g (10.5oz) squeeze bottle

## PAINT THINNER

If the paints appears too thick and you are using it directly from the bottle (i.e. as a pen), add a small amount of Color Line Paint Thinner and shake again vigorously. Distilled water can be added to the paint you intend to use, which should then not be returned to the original bottle.
Available in 50 g (1.8oz) squeeze bottle



## PLASTIC BOTTLE

100 ml plastic bottle including applicator and screw cap.
Ideal for mixing or diluting paints, for fine line or dot application or simply as a squeeze bottle for cleaning e.g. of Color Line Metal Tips.



## COLOR LINE TIP SET

The set includes 3 tips made from stainless steel. The nozzle sizes are $0.9,0.7$ and 0.5 mm to draw even the finest hairline. The body of the tip has an inside thread which will screw tightly onto the nozzle of the paint bottle. Each metal tip is supplied with a fine needle for cleaning.


## Product Information

## Techniques

## FINE TIP LINE DRAWING

Best worked directly from the bottle, you can achieve perfect line drawing or hand writing imagery by using one of our "Fine Metal Tips". The enamels are highly pigmented and extremely finely ground to ensure smooth application through the finest tip, giving a bright colour effect, even in a hairline drawing.
The soft plastic bottle lies comfortably in your hand and the paint flows readily, with perfect control, without having to use pressure.


## BRUSH STROKE

This is a ready to use product for painting on glass. The density and consistency straight from the bottle is ideal for a strong brush application. If a lighter coat is required, the paint can be diluted with a little bit of distilled water. The medium in the paint ensures that it holds well on the glass surface.
You can enjoy the freedom of direct application with a paint brush, a spatula or even your fingers. You can add a second brushstroke layer on an already dried area.


## AIR BRUSH

The paint consistency in the bottle is suitable for airbrushing with the addition of about 35\% by weight of the 'Color Line Airbrush Medium'. The enamel is ground so finely, that the grains will not clog the nozzle. The Airbrush Medium also acts as an adhesive on the glass surface, promoting the drying process and stopping the paint from running. Airbrushing allows the thinnest coat of paint, flawless shading, but can also offer a thick and even paint application on larger areas in a short time.


## Product Information

## Techniques

## SILK SCREEN PRINTING

The extremely high pigmentation of the Color Line Paints is ideal for screen printing. However, for optimal printing results we offer the same colour range made with an alternative medium giving it a pasty consistency. We call this line 'Silk Screen Paste'.
The medium holds extremely well on glass or on transfer paper for indirect screen printing. Color Line Paints work well with a 120 mesh screen.


## PAINT INLAY

After engraving or sandblasting a glass surface to your specific depth, fill the deep areas with Color Line Paints \& Pens. Use the paint directly from the bottle. Smear the paint over the glass surface, making sure to adequately fill the etched areas.
Dry well before removing the overspill with a spatula, squeegee or with your finger tips. This application gives you a sharp colour outline with a strong definition even in areas of very fine inlay.


## STAMPING

Do you remember stamp printing onto paper as a child? Now you can do it on glass. Color Line Paints \& Pens will work with any rubber stamp, linoleum cutting or a hand carved potato stamp. For sharp line definition and homogenously printed surfaces use 'Silk Screen Paste' (the denser and pasty form used for screen printing). Use a brayer to transfer the paint to the stamp and make sure all high points are covered.
The density of the paint will leave a strong and clearly defined image on the glass.


## $\triangle$ LAB NOTES

## Things you want to know when firing red

The red in vitreous products is known for its special character. It has always been difficult to make a consistent red glass, those who mastered it tended to keep it secret.

Color Line offers 3 brilliant reds - 125 Carmine, 011 Red and 074 Lacquer Red - which luckily are easy to use and behave much less capriciously than many other red enamels, however, there are few things to note:

1. Out of all Color Line products, Carmine, Red and Lacquer Red are the brightest in expression and shade. They are also the most difficult to get off your fingers and clothes. If you want to be on the safe side, wear old clothes and gloves when you work with these colours.
2. Even though the pigmentation appears and in fact is very strong, you need to use a good amount of paint to have a strong registration after firing, this is especially true when you airbrush the colour.
3. All Color Line Paints are freely mixable - including the reds. However, some mixes end up as a brownish/greyish shade after firing - looking very different from the unfired product. To be sure of your colour when mixing reds, we advise you to run some tests prior to working on a larger project.
4. We have discovered that trying to obtain a light pink when mixing red and white is tricky. Based on the problems mentioned under point 2 the red colour tends to burn out, leaving you with the white only. In our testing we found that a ratio of 1 part red and 6 parts Mix White 129 resulted in a pleasant pink.
5. Reds like to be fired alone, i.e. fire the other colours before and add the red in a further separate firing. This is recommended to avoid too much medium being burnt off in the presence of red. When the medium in the paints burns off, oxygen is consumed and creates a reductive atmosphere in the kiln, which can influence the red colours.
6. Finally, (and this is the solution to many firing problems), keep the kiln vent holes open during the firing. Especially the reds do not like the slightly reductive (oxygen poor) atmosphere you tend to have in any firing. By leaving the vent holes open, or the door slightly ajar, the kiln will draw in oxygen from outside and guarantee a neutral atmosphere and a stable and brilliant red.


For more info \& tutorials visit:
wWw.colorlinepaints.com

## Product Information

## I LAB NOTES

## Exploring Shades with Mix White



Color Line Paints \& Pens offer the maximum of colour mixes you can imagine. All colours mix freely, meaning you will not have unexpected reactions between specific colours as you might have with some other glass enamels.
In many cases, the result of a two colour mix can literally be guessed, but there are also some surprises to reckon with, and some shades are really hard to obtain.

We encourage you to experiment with small amounts of paint and take note of the volumes or weights you mix and to always document the fired result. If not, it is hard to back track what the ingredients were.

In our studio, we have run tests with the 18 ORIGINALS and also a few of the colours from the Creative Series, mixed with different ratios of the Mix White 129. We chose the Mix White instead of the normal White 128, because its properties are better suited for brightening a colour and also on account of its lower cost. In this test we started out with the pure colour and kept adding Mix White at different ratios. The shades we obtained got lighter and lighter - as you would expect - but not to the extent we had anticipated. To get really pale shades of a specific colour - and this was especially true for the darker shades - we had to add a lot of the Mix White.

We have mixed the colour with Mix White in 5 different ratios as shown in the table below. The number of new shades you obtain is amazing. If you have our 18 ORIGINALS colour set and an extra bottle of Mix White, you can already create over 90 shades, just following our mixing instructions.

Just imagine the range you can have by starting out with your own colour mixes and then brightening these with Mix White.

| Ratio | Pure Colour | $1: 1$ | $1: 2$ | $1: 3$ | $1: 4$ | $1: 6$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Paint <br> Mix White | $100 \%$ | $50 \%$ | $33 \%$ | $25 \%$ | $20 \%$ | $14 \%$ |
|  | $0 \%$ | $50 \%$ | $66 \%$ | $75 \%$ | $80 \%$ | $86 \%$ |



