ComposiMold Color Making Guide for Resins

EpoxyColors.com

By using the basic primary colors along with black and white, you can make a large number of different colors. This guide will provide background to the colors and how to start mixing your own colors.

The colors used in this guide are available through EpoxyColors.com. These colors are highly concentrated for strong, opaque colors. The colors include: Black, White, Red, Blue, Yellow, Green, Tan, Purple, Orange, and Brown.
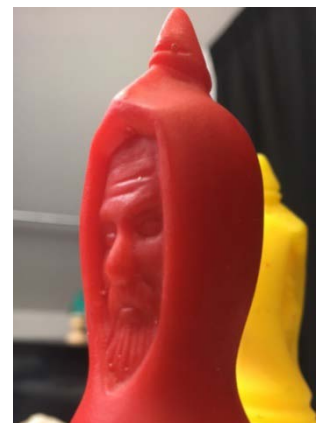
These color pigments remain concentrated for opaque colors when mixed with epoxy resins, silicones rubbers, and polyester resins (and urethane). One 6cc colorant size is typically enough for 1 gallon of clear epoxy resin when used in castings and coatings.

The EpoxyColors are in liquid form to provide improved mixing over powders or paste in the resins and when combined with other colorants.

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First Things First

Start with the smallest amount of pigment and add more in tiny increments. It's much easier and more economical to add dye than to have to lighten a color by adding more resin. Continue to add dye a drop or two at a time and then mix until you reach the the colors you want. This method will give you a lot of control and allow you to achieve different colors. When you're familiar with a particular product, you can add color a little more freely.

> **Important Reminder:** ComposiMold EpoxyColors are extremely concentrated. One drop goes a long way. Small amounts can make large changes in color when mixing.

Shake color bottles well and often. Most dyes are a suspension of color particles, so you need to make sure the dyes are well mixed to insure consistent color results.

Optional, but helpful: Keep notes of your color mixing so you can reproduce what you want. Things to track include: the number of drops of each color and the amount of resin.

Unless you have a very fast curing resin (such as a fast cure polyurethane), mix the two parts of the resin together first and then add the colorant. By mixing the colors after you have mixed the resins, you can get a better sense of the final color. It's also better to make a test sample first if you can.

Mix well into the resins, but gently so as not to incorporate a lot of extra bubbles. When the dye is fully incorporated, check the color. Use the intensity of the newly mixed color to determine how much more dye to add. If you get a big change in color, proceed by adding only one drop of dye at a time. If you only get a faint color, you can try a few drops at a time.

The EpoxyColors.com Colorants will not mix with water based materials and are not to be used for make-up or lip gloss.

Wear gloves and cover your work area in case you accidently spill. These are strong colors so a little drop will spread. The colorants by themselves will not dry, but they will absorb into fabrics, papers, and wood to leave colored spots.

If used in food safe resins, the colored resins are still food safe as long as the resins are completely cured.

Clean up: use hot soapy water to clean. However, the colors will stain. You're better off trying not to spill.

ComposiMold pigments can be used with epoxy resin, silicone, and polyester resin. They can also be used with polyurethanes, but many urethanes change color during curing so the actual color will vary based on the urethane color. For example, many urethanes turn white or off-white when curing, so you will need to factor in the white when making your mix. Plan on using a bit more colorant or experimenting first to see what the final color will be.

Colorant Added into Silicone

Multiple Colors within the Same Casting

A Variety of Different Colors Can Be Made

Types of Colors

Colors can be broken down into basics:

- **Black and White:** Not technically colors, but they still are.
- **Primary Colors:** Blue, Red, Yellow
  - Primary means they cannot be made from other colors. And with these colors, you can mix most other colors. This also means that if you only buy a few bottles of resin dye, these are the most important colors to have.

- **Secondary Colors:** Purple, Orange, Green
  - Secondary colors are the colors you get from mixing two of the primary colors together.

All primary colorants and Secondary Colorants are available through EpoxyColors.com. Although you can create a wide range of different versions of the secondary colors by creating tertiary colors.

And there are also the Tertiary Colors: Blue-Violet, Red-Violet, Yellow-Green, Red-Orange, Yellow-Orange, Blue-Green. These colors can be a range. Increasing or decreasing the proportion used of each color will give you an infinite palette of colors. And they can also be darker or lighter depending on whether any white or black pigment is added to the mixture.

Color Wheel
Follow these colors on the wheel

- Red and yellow mixed together make orange variations.
- Yellow and blue mixed together make greens.
- Blue and Red mixed together make purple variations.
- Mixing non-adjacent primary and secondary colors will make brownish colors.

Mix Colors into the Resin, Start with Small Amounts

To get bright colors, mix any of the colors on one side of the color wheel. For example, mix red with orange or yellow to make red. You can then mix orange with red to make orange-red. For bright colors, mixing colors nearer to each other on the color wheel gives you brighter results.

If you mix colors from two different sides of the triangle, like blue and red, you won't get a bright color. Instead, blue and red together make a dark purplish color.

For an unsaturated color like brown, you can adjust the hue the same way as you would for bright orange. Add small amounts of nearby colors on the color wheel: magenta, yellow, red, or orange. But since brown is not a bright color, you can also use colors from other sides of the triangle, like green or blue. The former will brighten your brown, as well as change the hue. The latter will darken it.

EpoxyColors.com Primary Resin colorant set includes red, yellow, and blue, as well as black and white. Often these colors are used straight from the bottle. However, you can also combine the colors to make secondary and tertiary colors into new colors. You will need to test them to make sure you get what you want. Because of variations in pigment content and types of colors, the ratios will not be what are predicted on a color chart. For example, a drop of red and a drop of yellow will make an orange, but if mixed equally, the color will be more of a darker red. To make into a bright orange, you will need to add more yellow, and even some white to make it lighter in color.

Colors consist of three dimensions: hue, saturation, and value.

- Hue refers to a color's position on the color wheel, red, orange, yellow, etc., plus all the intermediate colors such as red-orange and orange-yellow. Examples: Pink's hue is magenta or red. Brown's hue is orange because brown is dark orange.
- Saturated colors are rich, bright colors, like those in the rainbow or on the color wheel. Pale colors (tints), dark colors (shades), and muted colors (tones) are less saturated.
- Value refers to light versus dark. High-value colors are light (closer to white); low-value colors are dark (closer to black). For example, bright yellow is a light, high-value color. But you can increase its value more by adding white to make it pale yellow. Bright blue is naturally dark, a low-value color, but dark blue is even lower in value.

Tints & Shades & Tones

Any color can be lightened or tinted by adding white. For a very light color, it's better to add your main color to the white a little at a time so you don't waste supplies.

Adding Red to Blue Makes A Darker Purple. Adding White Will Brighten Up the Purple

You can shade or darken any color by adding black. You can also add the color's complement, which is its opposite color on a color wheel. For example, green will darken red and red will darken green. Add black or a complement a little at a time so you don't overdo it.

Tone Change. By adding both white and black (or white and the color's complement), you can make your color muted, grayish, or dull. By varying the relative amounts of black and white you add to your mix, you can obtain whatever value and saturation you're looking for. Example: add both white and blue to orange to make light brown. Blue will darken orange, and white will lighten it. Different light browns can be mixed

by controlling how much of each is added. However! Caution! Black is extremely powerful. Use a very small amount of it, or you will get a black.

If what you want is gray, then add tiny amounts of black to white.

Each color can be adapted. You can adjust the amounts of paint you use to get the exact color you're looking for and you can make darker or lighter versions by adding white and black. Any color can be warmed by adding yellow or cooled by adding blue.

When mixing the colorants together start by adding small amounts to adjust a color. You can always add more. This is especially true for black and blue, which tend to be very dominant. Add a little at a time until you get the result you want.

Mixing Primary Colors Creates Secondary Colors

If you combine two primary colors with each other, you get a secondary color. If you mix red and blue, you get purple or yellow and red become orange and blue and yellow make green. If you mix all the primary colors together, you get a black.
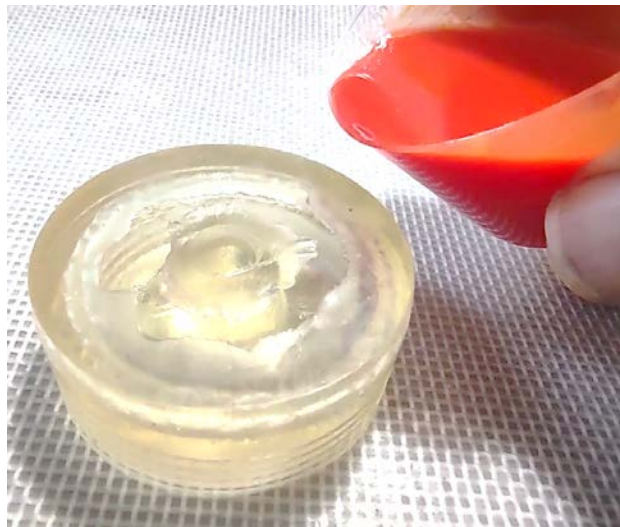
Pouring Colored Epoxy Into a ComposiMold Mold

Examples of Fish-bone Jewelry in Different Colors and Matching Mother Nature with EpoxyColors

Skin Tone (Flesh) Epoxy Pigment

To make skin tones start with a Tan or Brown and add Red, Yellow, Black, and Whites. Skins are typically a wide variety of colors and hues. And typically different areas of the skin are different colors.

Examples of Different Skin Colors
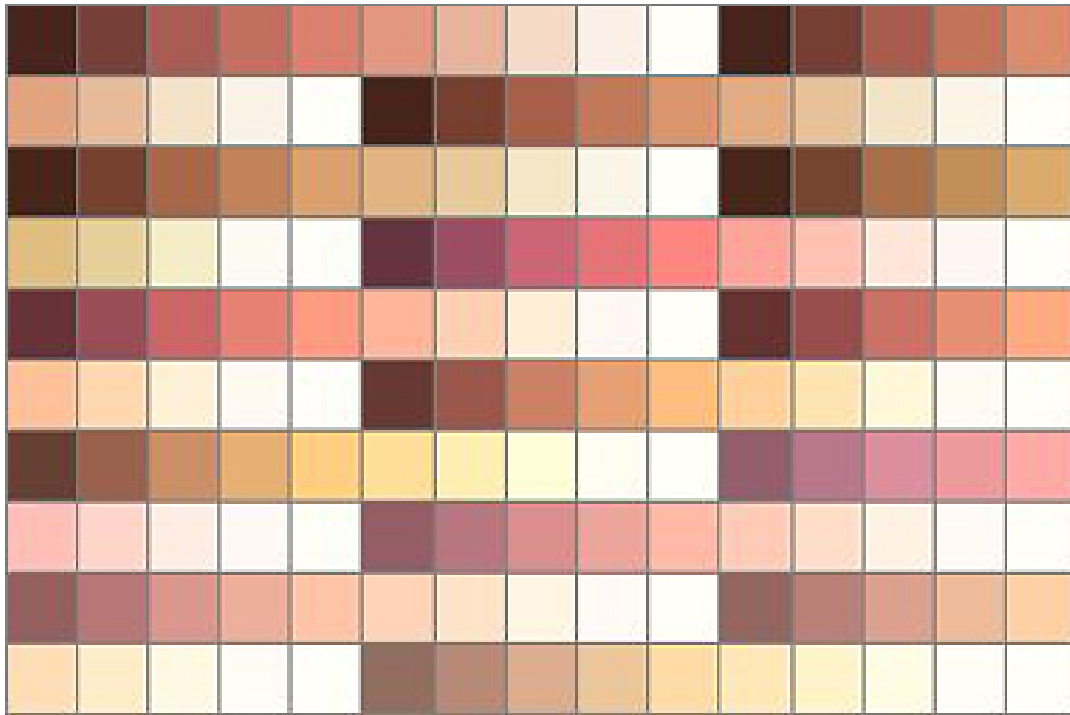
Skin Colors Contain Reds, Browns, Yellows, and Blues

Step 1

All flesh tones can be made with primary colors. Mix equal amounts of blue, red and yellow to reach a brown color. This is to create a base for your skin color that you can adjust to the type of flesh you are looking to reproduce. The result should look dark, but that is what you are aiming for. You can lighten this as you want. Fully mix the colors together before adding more.

You can also start with a basic tan. This is a white base with yellow, and a touch of red and blue mixed. From this you can adjust the color to meet the flesh color of your choosing.   To darken, add brown and/or a little red. To lighten, start by adding a little yellow and then add white as you want.

Step 2

Add more yellow to lighten the tone as necessary to acquire warmer flesh tones. If you know you are looking for a light flesh tone, start with more yellow than the other colors.

Step 3

This mix of colors will give you a nice base coat. However, if you're going for a more complex and accurate set of skin tones, you'll need other colors too. Mix red and yellow on a separate portion of the palette to give you an orange to add to the main flesh tone. This will help you build the tone better than adding red and yellow separately. A darker orange will help you work in darker tones, and a lighter orange will lighten. Control the deepness of the orange by increasing or decreasing the portion of red in the mixture.

Step 4

Adding white helps add vibrancy to any of the flesh tones you are attempting to create. The white adds a glow that helps to mimic human colors as well as add a pink hue for lighter-colored flesh.

Tips for Skin Color:

Some people tend to have a more yellow hue, some have a pink hue, and others tend to be browner. As you become more skilled, you will be able to adjust the base more quickly by starting with a greater amount of red, yellow or blue color. The darker the flesh, the more red and blue you will need. The lighter skin tones begin with more yellow.

No skin is a single tone. Vary areas of color to create more life-like skin tones. For more slight variations in color, you can mix in a tiny bit of Red and Yellow. *Skin has a wide range of colors you would not expect in skin. You might need greens, yellows, blues, or purples along with the browns and reds you usually associate with skin.*

Have the prospective skin tone that you are trying to emulate nearby. Compare the base you've created with the tone you are shooting for. If you're using a photograph, be aware of the lighting from the photo. Indoor lighting vs. Outdoor lighting also make a difference.

Mixing colorant is an art in its own right. Everyone has a different skin tone. This will take practice.

Lighten the color. If you need to make adjustments to lighten your base, use a combination of yellow and white. White will simply lighten your base, and yellow will create a warmer tone. Add small portions of paint to the mixture. [3]

Add reddish tones. Use the same process of lightening the base, this time using red. If you've already achieved the desired color, skip this. Be aware of the red qualities in the skin tone you're looking at. Red will sometimes occur more sporadically in skin tones. Don't add too much red, unless you're aiming to create a sun burn.

Continue making adjustments. Pay attention to the color you are trying to reach. Adjust in small increments. You might have to start over if you get the color too far off. If it gets too light, add red and blue bit by bit.

Create multiple skin tones to compare.

Mixing into Urethanes (Polyurethanes)

To mix the EpoxyColors with polyurethane, mix as normal, but take into account the color that the urethane will turn when cured. For example, many urethane resins turn white when cured, so be sure to account for that when adding color. So a black will end up gray or a red will be more pinkish. You can add more colorant as needed.

UV protection of the colors

The EpoxyColors provide excellent UV protection in resins. The added pigment reduces yellowing of the resin even when left under the sun for long periods of time.

Coating a Surface with Colored Epoxy

Opacity

To increase transparencies from opaque colorants: mix small amounts of the colorant with mineral oil to dilute before adding to resin. Use only a small amount of colorant and do not add more than 2% Mineral Oil (vs total resin content) or the epoxy resin may not harden.
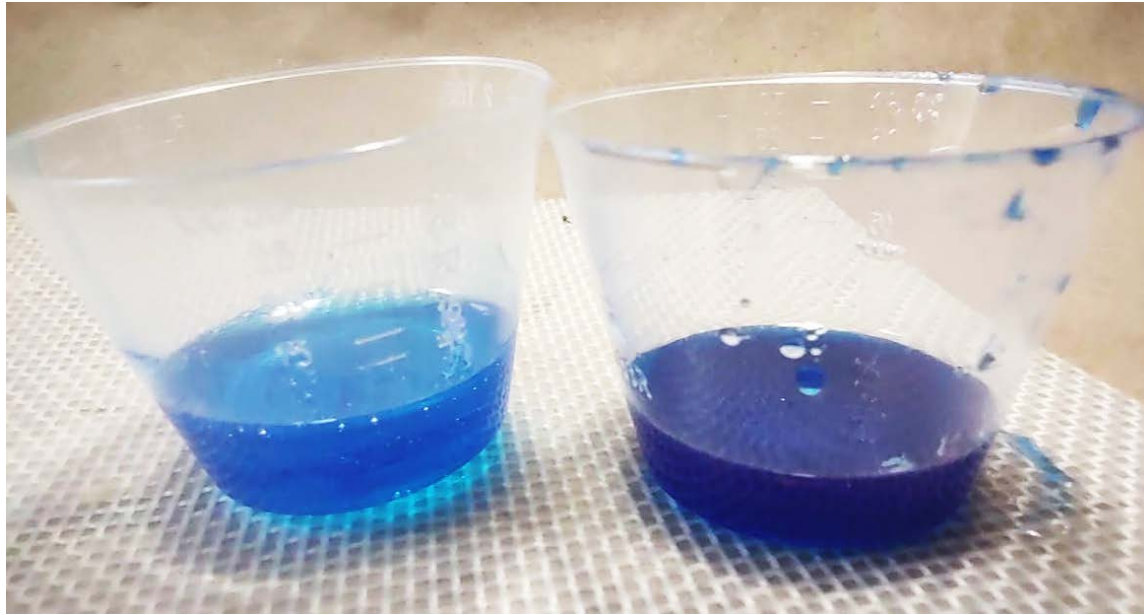
The Addition of Mineral Oil Can Create Some Transparency. Use Small Amounts of Color and Do Not Add More Than 2% Mineral Oil or the Epoxy Resin May Not Harden

Using colorants with Fillers in Epoxy Resins

Fillers such as plaster, sawdust, flour, pebbles, ground paper, etc. is beneficial to reducing the amount of resin used in a casting, which can reduce cost or provide a different texture or feel to a casting. Be sure to account for the colors of the fillers. For example a plaster will have a white accent in it that needs to be accounted for. Typically, you can see the final color when mixing because the epoxy color remains the same after cured.

Adding Filler (Sawdust) into the resin with Black Colorant makes an Epoxy Version of Bondo in Any Color

EpoxyColors.com

Thank you. If you have any questions, please email info@composimold.com

This ebook is a work in progress, so please let us know if you see any errors and if there is more you would like us to talk about.

Thank you!

Stan from ComposiMold