

# Adding Pigments and Creating Casting Effects Using duoMatrix™ NEO



## PRODUCT OVERVIEW

NEO can be colored by adding **Buddy Rhodes™ Pure Collection** powder pigments. **Metal powders** (bronze, pewter, brass, etc.) can be added to give the look of real metal castings at a fraction of the cost. Casting effects are also possible using **Cast Magic™** powders. You can create marbling and other effects using inexpensive fillers and pigments. Stone effects can be achieved using **Quarry Tone™** stone effects powders. Create long lasting glow in the dark effects by adding **Glow Worm™** glow powder.

## COLORING NEO USING BUDDY RHODES PURE PIGMENTS...

duoMatrix™ NEO cannot be colored using liquid urethane colorants or other liquid pigments. Various color effects can be achieved by using Buddy Rhodes Pure Collection™ powdered pigments. Pure pigments are added as a percentage of NEO Part A.

**Loading Rates** - Maximum loading rate is 5% of Part A by weight for most Pure Collection™ powdered pigments. **IMPORTANT** - Super Red - SB05 and Super Violet - SB88 are extremely concentrated, the maximum loading rate is 1% of Part A by weight.

**We recommend using a 100A : 70B duoMatrix™ NEO mix ratio when adding Pure Collection™ pigments.**

**Combining Pure Collection™ Pigments With duoMatrix™ NEO** - Measure pigment by weight of duoMatrix™ NEO Part A. Add powdered pigment to liquid NEO Part B. Use a turbine mixer attached to a drill to combine Pure Collection powdered pigment with NEO Part B.

Mix pigment and duoMatrix™ NEO Part B until completely blended, 30 - 60 seconds. Add duoMatrix™ NEO Part A powder to pigmented Part B liquid and drill mix until dry powder is thoroughly dispersed into latex (min. 60 seconds) and lumps disappear – mixture should have a creamy consistency.

Apply face coat as described on duoMatrix™ NEO Technical Bulletin.

**IMPORTANT** - The cure time for castings with Pure Collection™ pigments added is extended, depending on the amount of pigment added.

## MAKING “COLD CAST BRONZE” ELEMENTS...

Reproducing the look of metal (bronze, brass, copper, etc.) is a common application for NEO because you can achieve the look of real bronze at a fraction of the cost. For making solid castings, the following proportions will work well. -325 mesh bronze powder is recommended and should be pre-mixed with NEO Part A – Powder prior to adding Part B – Liquid. An accurate gram scale is necessary. Adding a dark pigment (Buddy Rhodes Carbon Black for example) to the dry mix will give the final casting added definition and dimension.

### Parts By Weight

Part A Powder	Bronze Powder	Buddy Rhodes Carbon Black	Mix Thoroughly	Part B Latex
100	200	0.25	Mix	50 - 70*

\*Use 50 parts Part B - liquid for a brush-on consistency and 70 parts Part B - liquid for a more pourable consistency.

Metal powders (bronze, copper, nickel silver, aluminum and brass) are available from Smooth-On or your Smooth-On distributor. Mix a small initial batch using 50 parts latex and brush mixture as a gel coat over mold surface. Let cure for 15–20 minutes. Mix a 2<sup>nd</sup> batch using no bronze powder – 2A:1B. Dip fiberglass matting into liquid. Squeeze out excess and lay over previous layer. Repeat until 3/8” (1 cm.) thickness is attained.

**Post Finishing Cold Cast Bronze Elements** - To bring forth the metallic finish, buff with steel wool or sand paper (400 grit). Patina coloring can then be done using cupric nitrate (green) or ferric nitrate (yellow) Casting should then be sealed with wax or clear acrylic spray to prevent oxidation.

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## **MAKING STONE-LIKE ELEMENTS USING QUARRY TONE™ FILLERS...**

Reproducing the look of real stone is also a common application. Mixing in **Quarry Tone™** stone effect fillers will yield realistic stone effects (with appropriate post-finishing technique). The following mix ratio is offered as an example.

**We recommend using a 100A : 70B duoMatrix™ NEO mix ratio when adding Quarry Tone™ powders.**

### **Parts By Volume**

<b>NEO Part A</b>	<b>Quarry Tone</b>	<b>Mix Thoroughly</b>	<b>NEO Part B</b>
100	100	Mix	70

**Post Finishing Stone-Like Elements** - To bring forth the stone finish, buff with wet Scotchbrite™ abrasive pad. Sandblasting will also work well.

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## **USING NEO WITH GLOW WORM™ GLOW POWDERS**

Glow Worm™ powders can be combined with NEO to create castings which glow in the dark for many hours after being exposed to light.

**We recommend using a 100A : 70B duoMatrix™ NEO mix ratio when adding Glow Worm™ powders.**

### **Parts By Weight**

<b>NEO Part A</b>	<b>Glow Worm™ Powder</b>	<b>Mix Thoroughly</b>	<b>NEO Part B</b>
100	100	Mix	70

Add Glow Worm™ powder to Part A - Powder and pre-mix thoroughly. Once Part A and Glow Worm™ powder is pre-mixed, combine with NEO Part B - Liquid.

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## **USING NEO WITH CAST MAGIC™ POWDERS...**

**A glossy silicone mold without release agent is recommended for best results with Cast Magic™ powders.**

Cast Magic™ Powder is brushed onto clean mold surface and excess removed (lightly blown from surface of mold with compressed air). NEO can then be poured gently into mold.

The surface texture of your mold will affect your results.

A mask must be worn when working with Cast Magic™, do not breathe particles.

If applying using a hand lay up method, do not brush initial layer of material onto mold surface as this can displace Cast Magic™ from mold surface creating uneven results by disrupting surface coverage. Slush casting or rotationally casting initial face coat is recommended. Additional layers can then be applied for lay up with or without glass reinforcement.

Pigmenting NEO using Buddy Rhodes Pure Collection™ Carbon Black pigment is recommended for more dramatic color effects. See NEO and Cast Magic™ color chart at [smooth-on.com/castmagicneo](http://smooth-on.com/castmagicneo) for examples.

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## **PAINTING AND SURFACE PREPARATION...**

duoMatrix™ NEO castings must be allowed 24 hours of drying in an environment with less than 50% humidity prior to painting. After drying for 24 hours, release agents must be removed from castings, otherwise paint will not stick.

To remove Ease Release™ 2831 or Sonite™ Wax from a NEO casting, a cleaning solution of 10 Parts warm water (120°F / 49°C) and 1 Part dishwashing detergent should be used. Using a soft nylon brush, scrub over the entire piece two to three times making sure to get into all the surface details. Remove soap solution from castings by rinsing under warm water and allow them to air dry before sealing or painting.



**Call Us Anytime With Questions About Your Application.**

**Toll-free: (800) 381-1733 Fax: (610) 252-6200**

[www.smooth-on.com](http://www.smooth-on.com) is loaded with information about mold making, casting and more.