



USING YOUR BLUE RIBBON ROCK MOLDS

These casting instructions are for all of Blue Ribbon's latex molds; Read the section on rock casting first. It contains all the general information on mold preparation, plaster mixing, casting, and painting. Then read the retaining wall or stump instructions for specific tips and techniques.

EQUIPMENT AND MATERIALS NEEDED

- Joy or other liquid dish washing detergent
- pump-type spray bottles
- plaster, Hydrocal, or Sculptamold
- plastic mixing bowl
- rubber spatula or large spoon
- teaspoon and a one-cup kitchen measure
- paper cups
- palette, hobby, or carving knife
- Acrylic, latex, or water-thinned hobby paints
- black India ink
- large screw-top jars
- paintbrushes
- shallow dishes for mixing colors
- talcum or baby powder

MAKING ROCK CASTINGS — There are two ways to make plaster castings from your molds. You can fill each mold with plaster at the workbench (I'll be using the word "plaster" interchangeably for molding plaster, patching plaster, plaster of Paris, and Hydrocal™), let the plaster harden, and save the castings for later. Or second, you can fill the mold with plaster, lay the full mold on the scenery and let it harden.

By casting rocks on the workbench you have the advantage of making and coloring the rocks before your scenery is in place. This method is handy if you are still experimenting with casting and coloring, or your scenery's not yet ready for rocks.

An advantage of casting directly on the scenery base, is that you can conform the rocks to uneven terrain. Also, after all the castings are in place you color the rocks while you color the rest of the scenery.

CASTING — Mix plaster by placing one cup of cold water in a mixing bowl, slowly add two cups of fresh plaster, and mix until there are no lumps. The plaster should be the consistency of heavy cream. If it's too thin, add a little more



plaster and stir again. If it's too thick, add water, several drops at a time, while stirring. Stir slowly, to mix completely but to avoid trapping air bubbles in the plaster.

(The plaster will set faster if you use warm water; To retard setting, use very cold water. To retard setting even further add 1/2 tsp. of vinegar to the water. If you're not sure of the plaster's age mix a test batch to determine the setting time and to make sure it will set at all!)

Support the mold on a pile of old towels or in a box full of Styrofoam packing peanuts. Set the mold so the sides are level. Elevate the low areas to keep to soupy plaster from running out. Spray the interior of the mold with wet water. (To make wet water add several drops of Joy detergent to 16 ounces of water in a pump-type spray bottle.)

Slowly pour the plaster in a thin stream into the wet mold. When the mold is almost full, tap the sides to dislodge any trapped air bubbles. If you're making castings to be placed in the scenery later, stop here! Allow the plaster to set until the mold is warm and the plaster hard. Gently peel the mold away from the casting and proceed to the painting section.

If you plan to place the rock casting directly onto your scenic base, fill the mold as described above, but watch the plaster as it starts to set. The mold should be placed on the scenic base just as the plaster loses its soupiness, but before it becomes inflexible. Place the filled mold on the palm of your hand and push it onto the scenery to make it conform to the contours. Now hold it in place for several minutes until the mold gets warm and the plaster feels hard. Let go of the mold and wait about ten minutes for the setting process to continue.

You can vary the shape of your rock faces by pressing and distorting the mold. If you have an odd-shaped area or need to bring the rock face up to the edge of a bridge abutment, wall, or backdrop, trim the edge of the mold with scissors. If you need smaller rock castings, fill just half or a third of the mold with plaster or cut the mold into the desired size or shape.

After about ten minutes peel back one corner of the mold to see if the plaster has set. If the mold looks clean with no plaster clinging to it then the plaster has set enough for you to carefully remove the mold.

Trim the damp plaster rock casting with a palette or butter knife to fit the scenery contour. Slice and scrape the edges of the casting, but be gentle — you don't want to damage the casting or crack the scenery base. Use the tip of a hobby knife to finish the edges. Fill holes or gaps in the casting with leftover plaster.

Now install a second casting next to the first to build a large rock face. Wash the mold to remove clinging plaster, rewet its surface, and repeat the procedure. When you remove the mold from the second casting, start by peeling at the edge which overlaps the first casting. With the palette knife, using a jabbing and twisting motion, break away pieces of the new mold that do not blend with the first mold. The second casting should fit the contour of the first. With the tip of a hobby knife pick away excess plaster and carefully blend the two castings together.

Remove any plaster chips with a stiff paintbrush and save the scraps for making loose rocks and rubble.

COLORING YOUR ROCK CASTINGS — Coloring rock and terrain castings is not art—it's simply finding the colors you like, learning the best way to apply them and lots of practice.

Because my railroad (and perhaps yours) is viewed under weak indoor light — 100 times less bright than outdoors, I like rock colors lighter than prototype colors .

I prefer to color castings just after the plaster has set and is still damp. If you made plaster castings on the workbench and they have dried, re-wet them by soaking in water until the bubbles stop.

The coloring materials I use are flat latex wall paints, inks, acrylic tinting bases, acrylic tube colors, and Polly Scale paints. All can be thinned with water, are easy to clean up, and are non-toxic. They are also cheap and available in most hobby, art, and hardware stores.

I color all the rock castings in four steps:

- A black wash is sprayed into the shadows.
- The basic rock color is applied.
- I add more of the black wash in the deep shadows.
- After the casting dries I dry brush the highlights with white.

To make the black wash fill a one-pint spray bottle with water and add 2 to 3 tablespoons of India ink and several drops of liquid detergent. Shake the bottle to mix and test spray onto a piece of scrap plaster.

Spray the wet castings with the black wash. This can be done as soon as the mold is removed from the casting. The black wash will color the white plaster and add relief to the

rock face. Spray until the wash runs off the casting. Then spray more black wash into the deep crevices and under overhangs or anywhere there's a deep shadow..

While the black wash is still wet the basic rock color can be applied. The colors will blend and mix to give natural results. I color most rocks with the same earth color that's used on the rest of the layout.

Lots of water is mixed with the paint to make a THIN wash. I stress thin because, if the rock color is too light more paint can always be added to get the desired intensity, but the opposite — too much color — cannot be removed and your rocks will be too dark.

EARTH COLOR — I use earth colors based on the prototype I'm modeling. I'll take a soil sample or a Floquil Poly Scale color chart to the paint store and have them mix a quart, or more, of their cheapest flat acrylic indoor paint.

At home I'll find two large jars with screw-top lids. I fill one jar one-third full with your earth paint, then add water until the jar is full, mix well, and I label it "**basic earth color.**"

Add 1 cup of the **basic earth color** to the second jar and stir in 2 cups water. Label this second jar "**basic rock color.**" Cover and shake well to mix.

Fill a pump-type spray bottle with the basic rock color and spray it on your damp rock castings. Spray from above to try to get more paint on the raised surfaces than in the shadows. After spraying evaluate your results. Your rocks should be dark in the cracks and shadow areas with light rock colored highlights. If not, spray on more basic rock color.

Let the castings dry overnight and evaluate the coloring again. If the basic color is still too light, re-wet the casting and repeat the coloring procedure. Don't be afraid to spray more of the black wash into the shadow areas until they become very dark. Allow the rock castings to dry overnight before evaluating the coloring.

DIFFERENT ROCK COLORS — Try these rock coloring formulas (some tube colors are not available in certain parts of the country or have been discontinued by the manufacturer, so feel free to experiment with different colors and formulas. Keep notes so you can repeat results):

Blue rock: add a 1" squeeze of Cobalt Blue acrylic tube color or 1 tablespoon of Floquil's Polly Scale Dark Blue to the spray bottle of basic rock color.

Red rock: add 1/2 tablespoon Red Oxide tinting color (available in paint stores). Or try a 1" squeeze of raw sienna acrylic tube color. Mix into the basic rock color.

Always experiment with new rock colors on a piece of scrap rock casting before using them on your layout, and always evaluate colors only after the plaster has dried.

PAINTING THE ROCK SHADOWS — The next step is to paint the shadow areas of the rock castings with a darker basic rock color. Mix one cup of basic rock color and 1/4 tsp. of India ink in a shallow dish. Turn on your normal railroad room lights and brush paint this mixture into the rock shadows. Paint with a dabbing motion to blend the shadows without leaving telltale brush marks. Let the castings dry completely.

DRY BRUSH THE HIGHLIGHTS — The finishing touch is to dry brush the rock highlights. This will emphasize the surface detail. Mix 2 tablespoons of flat white latex paint (or Polly S Reefer White) into 1/2 cup of basic rock color. Pick up a little of this mixture on the tip of a stiff-bristled brush and scrub off most of the color on a piece of cloth or paper towel. Pat the brush on the top-most surfaces of the casting (like you were tickling it with a feather), adding color only where sunlight would cause highlights. Brush only from top to bottom. The object is to add a lighter color to the parts of the rock face that would be struck by sunlight. Keep adding paint to the brush, wiping most of it away and lightly dry brushing the rock surfaces until all the highlights are accented.

You may want to go one step further and dry brush pure white onto the very tips of the rock profile, but be careful not to add too much white — you don't want your rock faces to look "frosted."

Your rock castings are now finished except for detailing and weathering. Detail the rock castings with bits of lichen, scenic foam, or other texture material glued in place with matte medium or white glue. Castings can be weathered with powdered pastel chalks exactly as you would a structure.

LOOSE ROCKS AND RUBBLE — Save all of your left-over plaster scraps and store them in a plastic or paper bag. To make rubble break them into irregular pieces by beating on the bag with a hammer. Put the rubble in a coffee can, moisten it with water, and pour in some of the black wash. Shake until the wash covers all surfaces. Next pour in some of the basic rock color and swirl it around. Drain off excess paint and spread the rubble out on newspaper to dry for several days.

Dump the rubble at the base of your rock castings, spreading it with a soft brush until it looks natural. Soak the rubble with wet water and flow on diluted glue (dilute white glue 1:1 with water, or dilute one part matte medium with three parts water plus a few drops of detergent) using an eye dropper. Paint in deep shadows and dry brush rubble highlights after the glue has dried overnight.

USING YOUR BLUE RIBBON WALL MOLDS

RETAINING WALLS — Like rock molds, retaining walls may be cast on the workbench or directly into your scenery base.

By casting these wall sections on the workbench you have the advantage of making them at any time, even before your scenery is ready for them. Bench casting is also handy for modelers who are still experimenting with casting and haven't decided where the finished wall will be used or for those who will cut up the castings to make building walls and foundations.

Casting the retaining wall directly into the scenery base allows you to conform the walls to the terrain, and several walls can be placed side by side to extend their length. You also have the advantage of coloring the walls while you color the rest of the scenery.

CASTING — Mix the plaster and slowly pour it into the wet mold. Try not to trap air bubbles on the mold surface. Pour only enough plaster to fill the mold level with the top.

Tap the mold to dislodge trapped air bubbles. If this casting will be used later, stop here, and allow the plaster to set thirty minutes to one hour. Gently peel the mold away from the casting and proceed to the painting section. (To get a flat rear surface scrape away excess plaster with a straight-edge before the plaster completely sets.)

If you plan to install the wall casting onto your scenery base watch the plaster as it starts to set. Place the onto the scenery base mold before it becomes inflexible. Hold in place until the plaster starts to set. The mold can be removed after the plaster hardens.

CUTTING AND MODIFYING THE CASTINGS — The wall castings are in a size handy for most model railroad applications. If you need a smaller wall section cut the casting with a hack saw blade. Saw gently holding the casting on a flat surface. Be careful not to crack the casting. Weathered and Block Wall castings can be separated along the mortar lines by deeply scribing the back of the casting and snapping in half. To insure a clean break align the scribed line with the front edge of the workbench. and snap using the edge as a fulcrum point. Mistakes can be repaired with white glue. Windows and doors can be cut into the castings and other modifications carved with a sharp X-acto knife.

COLORING — I color wall castings while the plaster is still damp. If you made the castings on the workbench and they are now dry, re-wet them by soaking them in water.

First, spray the casting with the black wash — use enough

so that the excess runs off. Follow this with the basic rock color.

For different colored walls try these formulas: **Concrete Retaining Wall:** add a 1" squeeze of Medium Gray acrylic tube color or about 1/2 tsp. of Floquil's Polly S Reefer Gray into the spray bottle of basic wall color.

Red Granite Wall: add 1/2 tsp. Floquil's Polly S Rust, or a 1" squeeze of raw sienna acrylic tube color to the basic wall color.

Always experiment with new colors on a piece of scrap wall casting before using them on your layout, and always evaluate colors after the plaster has dried.

The next step is to paint some of the individual stones a slightly different color. In a shallow dish, mix several tablespoons of basic wall color. Open several bottles of Floquil's Polly S colors that are darker than the stones in the wall and open a bottle of Polly S Reefer White. Work under your normal railroad room lights. Pick up a brush load of Polly S paint from one of the jars and mix it with some of the wall color. Dab this onto the surface of a stone, evaluate the color.

If it looks good, continue painting individual stones at random. Wash the brush in fresh water and try another color. You can paint some of the stones a lighter color by mixing the Reefer White with the rock color. Continue until about half the wall has different colored stones. Allow the paint to dry completely.

The last step is to dry brush the highlights of the stones using the techniques as explained in the rock painting section.

Your retaining wall castings are now finished except for gluing them in the scenery, detailing and weathering. Weather your wall casting with thin acrylic washes and powdered pastel chalks exactly as you would a structure. Detail with bits of lichen, scenic foam, or other texture material glued in place with diluted matte medium or white glue.

WALL CASTING TIPS:

- To model a curved wall fill the mold with plaster and as soon as it starts to set place an object, like a wooden block, under one end of the mold. Raise the mold until you get the desired curve.

- The surface of the molds can be changed or repaired by mixing a little soupy plaster and applying it with a toothpick.

For more rock building and coloring information check out my video tapes:

Rocks and Basic Scenery Made Easy

I show you the tools and techniques I used to build the Pennsylvania and Cactus Valley model railroads that appeared in MODEL RAILROADER magazine.

The topics covered in this video tape are:

1. Building a lightweight scenic support.
2. Using Rigid Wrap to cover the scenic base.
3. Casting rocks in rubber molds.
4. Applying the rock castings.
5. Using lightweight Gypsolite for scenic texture.
6. Painting the rocks—a revised guide using my water soluble methods.
7. Detailing around the rocks with foam putty.

Each tape contains a Quick Reference card listing the tools and materials used, paint mixing formulas, and addresses of suppliers. 50-minutes, VHS or DVD.

Price — \$19.95 plus \$4.00 USPS Priority postage.

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Building Trees, Weeds, roads, Water & More

This video tape continues where **Rocks and Basic Scenery** leaves off.

Learn how to:

1. Add dirt and texture.
2. Build tar and dirt roads.
3. Make 4-types of trees.
4. Select and install weeds.
5. Make texture over texture ground cover.
6. Create clusters of detail.
7. Build water - the easy way.
8. Ballast and weather your track.
9. Install the structures.
10. Detail the scene.

The **Quick Reference** card has instructions and coloring-mixing formulas, a list of the tools and materials, plus a list of suppliers. 60-minute, VHS or DVD.

Price — \$22.95 plus \$4.00 USPS Priority postage.

Special price: Both video tapes \$39.95 plus \$4.50 for Priority Postage.

Download my complete rock and retaining mold catalog from the internet at:

<http://www.mrscenery.com>