

### **Recipe for lightweight, inexpensive ballast**

Only two ingredients: perlite and the cheapest water based paint/stain you can find. Perlite is the white, rock-like material used in plant propagation, normally available at any nursery area of your local home center and often is available in either one cubic foot or four cubic foot bags. It's very white, but we're going to change that.

Often home and/or paint centers sell returned paint cheaply. Color is not too important here as prototypical ballast varies much in color, although darkest is best. Thin the paint/stain to a very watery consistency; close is plenty close enough.

The starting ratio is about one cubic foot of perlite to about 1.5 quarts of thinned paint/stain.

Dump the cubic foot of perlite into the wheelbarrow and dump the quart and a half of paint/stain into the pile. Using a hoe or rake, blend the mixture until it looks like the perlite is colored... use a little more of either to get the look you like.

When mixed close to satisfaction, dump the contents out onto newspapers spread over the floor and spread out to dry. If you have the space, all three or four cubic feet can be dumped on the newspapers. Over the next couple days, occasionally break up the clumps and turn it all over to ensure it dries. Don't try this outdoors in Livermore!

When dry, scoop into a bucket(s).

Ballasting track: Before track is attached to roadbed, don't paint the roadbed as you want the glue to penetrate the wood.

Preparation for fastening ballast to modules: Titebond II, Titebond III and Elmer's Concrete Bonder are the best glues. Don't use Quickcrete brand concrete bonder...not good for this application. Mix glue about 1:1 with water into an applicator such as a pancake syrup, salad dressing or ketchup bottle...something that will dribble the mixture out. To this mixture, add a few drops of dishwashing detergent and give a little shake.

Before spreading ballast, using a spray bottle, spray the wood/track with plenty of water (not above mentioned glue blend) to get everything wet. Best if a couple drops of dishwashing detergent is mixed with this water just as you did with the glue mixture to ensure good surface covering.

Spread the ballast in the wet wood and track, along and around the ties to the look you like (ties covered vs. ties visible). Careful of those switch points...keep that area clear of ballast!! When the ballast is spread where you like, spray again with the water spray bottle.

Next, lay more newspaper under the module. Now, start to dribble on the glue mixture. When you've made a pass and think you've applied enough, put at least that much on again. When you've made that second pass, do the previous two steps again...yes; four passes! Keep dribbling until the glue mixture is running out of the cracks onto the newspapers underneath. And yes, it's OK to make a fifth pass. Unless you have a bunch of delicate electronics underneath, it's not possible to lay in too much glue. Let it all dry and you've got a module that will take some handling and keep looking good.