

Making Hypertufa Planters

"Hypertufa" is a form of concrete which home gardeners can use to create their own planters. It is cheap and very versatile. It is capable of producing very large planters and planters of unusual "custom" shapes. It is especially useful for creating large trough gardens. The hypertufa is relatively lightweight when compared to normal ceramic materials and can be made to look like natural stone. "Tufa" is a natural stone that this material can be made to look like, thus the term "hypertufa". Martha Stewart has an informative video on the internet about the material <http://www.marthastewart.com/997470/how-create-your-own-hypertufa-pots-part-1>



1. * "Dave's" hypertufa ingredients by volume (figured for a 15 inch bowl 4 inches deep):
 - a. 2 parts Portland cement ($\frac{1}{2}$ gallon, 8 cups, Home Improvement Store)
 - b. 2 parts perlite ($\frac{1}{2}$ gallon, 8 cups, Home Improvement Store)
 - c. 1 parts peat moss ($\frac{1}{4}$ gallon, 4 cups, Home Improvement Store)
 - d. Decorative materials:
 - i. 1 part brown and black plastic pellets or aquarium gravel ($\frac{1}{4}$ gallon, 4 cups [1 cup brown, 3 cups black] plastic pellets on Ebay or gravel at any pet store)
 - ii. 1 part fine vermiculite ($\frac{1}{4}$ gallon, 4 cups, Home Improvement Store)
 - iii. 0.5 part black sand ($\frac{1}{8}$ gallon, 2 cups, only Petco)
 - iv. Small amount brown concrete color pigment (one tablespoon NewLook Light Brown Cement Color, Home Depot via internet [not in store]).
 - e. Reinforcing Materials:
 - i. 0.25 parts nylon fiber mesh (1 cup, "Concrete fiber" on Ebay)
 - ii. 0.5 parts acrylic liquid cement adhesive ($\frac{1}{8}$ gallon, 2 cups, Quikrete Concrete Acrylic Fortifier at Lowes, Sika brand acrylic latex admix at Home Depot)

2. Select a mold (or form) you want to put the planter hypertufa on the inside or the outside of.
3. Place a plastic sheet (cut plastic bag) over the entire mold to allow release.
4. Put on rubber gloves (wet cement will literally burn the skin on your hands!).
5. Mix dry ingredients thoroughly then add cement adhesive
6. Add water and knead everything thoroughly to the consistency of dry cottage cheese. You want to be able to make a fist sized ball of the material which holds together without dripping.



7. Apply hypertufa to total thickness of 1 inch (small items) to 2½ inches (large items).



8. Create multiple half inch to inch wide drainage holes with a stick or a pointed tool.
9. Press the hypertufa down firmly with the fist to eliminate air pockets.
10. Put the planter and its mold in plastic bag for 48 hours to do the initial cure.
11. After 48 hours take hypertufa planter and its mold out of the bag
12. Carefully remove the mold and then peel off the plastic (planter is only partially cured and pretty weak).
13. Clean out the drainage holes and round off the edges with a pointed trowel
14. Gently clean outside of the planter with a wire brush and water to reveal decorative materials.



15. Place back in the bag for three more weeks of curing.
16. Take the planter out of the bag and allow it to dry completely
17. After the planter is dry, remove any protruding nylon fibers by burning with a propane torch.

*The "Classic" hypertufa recipe doesn't add sand, nylon fibers or acrylic, instead it simply uses 1 part cement to 1½ part peat moss to 1½ part perlite. My problems with this "Classic" mix are that it ends up looking like the ugly concrete exposed in parking garages and has no shock resistance. The vermiculite, plastic pellets, aquarium gravel, black sand and cement coloring can be combined so as to give a more natural, tan, granite-like look to the mixture. Note that excess coloring added to the cement will weaken the planter, so using small amounts of color to only obtain a light shade of concrete is best. The acrylic additive bonds the nylon fibers to the cement, an important factor in adding shock resistance to the planter.

Molds (or forms) can be anything plastic: pots, planters, mixing bowls, Sterlite boxes, mini-pond forms, wastebaskets, laundry baskets, the bottoms of garbage cans, the inside of bathtubs, cut Styrofoam board duct taped together, etc. The hypertufa can be put on the inside or the outside of the mold. Cardboard tends to soften and give way so it isn't a good mold material. Use your imagination. Using bubble wrap as the plastic liner gives an interesting texture. Pressed-in fern fronds on the outside make a very good effect.

The “decorative ingredients” can be left to your imagination. For instance, replacing the peat moss with 0.25 parts nylon fiber mesh, adding three parts white aquarium sand from Petco and two tablespoons white Titanium Dioxide whitener from Ebay will give a very white limestone-like appearance to the container. Using two parts of various shades of blue plastic sensory pellets from Ebay (or free from Dave Bogert) and no other decorative additives will give a blue planter, green pellets a green planter, etc. And of course aquarium gravel comes in a wide range of colors. You can even buy blue, yellow or green cement pigments over the internet. You can buy reddish terra cotta cement color and black cement color at home improvement stores.

Replacing the two parts of perlite with two parts vermiculite and using only two parts of vermiculite (4 parts vermiculite total) and brown cement color as the decorative material will give a tan, shiny, mica-like surface to the planter (planter will also be noticeably heavier). Replacing the vermiculite with 1.5 parts of black sand and using one part black plastic pellets or aquarium gravel and one tablespoon of black cement color will give a dark grey overall color with white (from the perlite) and black highlights, the look of classic grey granite. Don't add paint to the mix, additives in the paint interfere with the concrete curing.

The “brushing” after the 48 hour cure is quite messy and can best be accomplished with a steel brush and a water hose outside on a grassy surface, newspapers, or a plastic throwaway tablecloth. When removing nylon strands with a propane torch keep the torch moving, you don't want to heat up the hypertufa any more than absolutely necessary.

The following are some “official” hypertufa recipes (from Oregon State University):

Basic Hypertufa Recipe

1 part Portland cement
1½ parts peat
1½ parts perlite

Hypertufa Recipe for Added Strength

1 part Portland cement
1 part sand
1 part peat
1 part perlite or vermiculite

Hypertufa Recipe with Fiber Mesh for Added Strength (“Dave’s” recipe is a variant of this).

2 parts Portland cement
2 parts perlite
1½ parts peat moss
½ part coarse sand
1 large handful nylon fiber mesh

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