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Fun with Styrofoam



By [Alex Fethiere](#)

Alex Fethiere

These mortared styrofoam assemblies are easy and fun to make.

I've been known to accumulate free materials towards an indistinct future use. Some call that "hoarding."

At one point it was scraps of Kevlar. At another, 55 gallon drums. More recently, it was styrofoam packing forms.

Expanded polystyrene (styrofoam) is easily recycled by densifiers, which reduce it to 1/90th of its aerated volume and extrude it into ingots. Even if we have such facilities in Mason County, I'm not inclined to bundle up trailerloads of foam and deliver them, or burn it.

I have used planks of styrofoam to insulate buildings by spray-foaming them into cavities after cutting them to size with a fish filleting knife. A hot wire cutter works even better, but mine is down for repairs.

Packing forms come in more challenging shapes, and after accumulating quite a few from sundry appliances I thought to make something out of them - if just to be rid of them. Coating them with concrete would make them last much longer in the elements, and usefully.

Departing from hypertufa, I thought to make planters out of them. Hypertufa is an aggregate material of porous components like perlite and vermiculite, held together with Portland cement. Its production on a craft scale sounds slow and laborious compared to smacking up some styrofoam with mortar.

I used to build my own forms for lost-foam casting of sculptures, so I know styrofoam sticks together readily and firmly with a glue gun. It's easier and stronger than tape or wire reinforcements.

Several packing forms later, I stuck together conventional box shapes from planks and had much better luck making them solid. The packing form boxes are more interesting, but need additional reinforcement with hardware cloth because there are gaps and fewer points of connection.

These objects have uses beyond planters: they can serve as heat sinks on metal buildings. Your shed will look a lot more like a castle when it has parapets of concreted foam; if the material is good enough for mini-golf landscapes, it'll do for me.

If this cement shortage continues, we might even stick together foam rubbish into the shape of an ecology block and coat it with mortar. How many interlopers will try to move that to trespass?

But I'm getting ahead of myself. I don't know if these will hold up to carrying a load of soil and a tree, and they haven't yet dried enough for me to say for sure. I can't wait to see if they hold water - at the very least they're great bird baths.

The learning curve of applying mortar to irregular surfaces is steep. Mortar consistency and speed of application is everything because it sets quickly.

I started light with diluted mortar and aimed to apply only two coats. I worked fastest when I had several forms laid out and could apply small batches of mortar to their uppermost and inner upward-facing surfaces.

I look forward to making some pollinator fountains and birdbaths out of this material. It would be easy to cement tubes and pipes in place during construction.

P.S.: Free giant sequoias and coastal redwoods up to 6' tall will be available again in fall from Michigan's Archangel Ancient Tree Archive, via Dave Pearsall in McCleary. E-mail me at the below to get on the list, pick-ups will receive preference.

(PHOTO: These mortared styrofoam assemblies are easy and fun to make. Photo: Alex Féthière)

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