Making fake rocks and rock walls in your reptile enclosure

Some people have asked me how I built the rear wall of my new terrarium. It's easy to find lots and lots of German websites that describe how to build such a wall (they are rather popular here because they look so good, are EXTREMELY cheap, durable, easy to make and "unique") but I haven't found an English website that has such a description.

I saw many pictures of enclosure where all 5 sides were only glass and I think dragons enjoy an enclosure where they can climb/hide/bask on their walls MUCH more (they have much more space to move around, and my dragons spend 90% of their day on the walls). That's why I thought I would write this article.

There are pictures to help you along the way if you can't follow what I'm saying.



List of materials

- Polystyrene/Styrofoam
- Paint Thinner / White Spirit / Mineral Turpentine or Liquid Nails (one that sticks to polystyrene)
- PU Foam / Insulation in a can
- Silicone (which I personally don't recommend, as it takes a long time to dry) or something else to stick the polystyrene to your wall (I used a hot glue gun and Liquid Nails works well)
- Tile Adhesive (the same stuff you use to lay the tiles in your bathroom the liquid type, not the dry powder type)
- Bondcrete, PVA Bonder or Tile Grout Sealant (optional this can be used to make a very durable and hard surface at the end)
- Hacksaw blade and sharp knife. For a smooth finish a blow torch or gas can burner can be used to heat the knife up and ensure a smoother cut.

That's about all you need and, as I said, it's really cheap.

Directions

Take a brush and put some paint thinner (maybe diluted with water) onto the polystyrene. This is how you create your realistic rough surface and holes. Don't use too much thinner straight away, as the holes will probably end up bigger than you thought!



Stick the polystyrene onto the walls using whichever method suits you best. If your enclosure is made of wood or mesh, maybe you could use wire. I used a hot glue gun as silicone takes so long to dry and Liquid Nails works well.



You can also stick pieces up at angles to make shelves and ledges for the reptiles to bask on and hide under.

TIP

Spots that need frequent cleaning (most often the basking spots as the heat speeds up digestion;-) should be built more robust because otherwise you run the risk that the tile adhesive breaks and comes off after a while.

I now put flat stones on the basking spots which has the advantage that they get warm (-->underbelly heat ;-) and are much easier to clean.



And here we use the "insulation in a can" to fill in the gaps between the pieces of foam.



Cover everything with the tile adhesive or grout. For the first layer, put a bit more water into it to let it really settle into all the little nooks and crannies. Take your tile grout and mix it on up (all it takes is water.)

I suggest doing this in a well ventilated area, it is quite smelly and might make you nauseous. Your first batch of tile grout should be fairly thin.. You will use this as your base coat and you need it to sink into all the nooks and crany's to make sure you covered everything. I would do at least two of these types of coats. Let the coat dry before you start applying the second coat.



Let each layer dry for about 24 hours, making about 3-5 total layers. This will make your wall very hard and durable.



You can also put colours into the wall by adding different coloured sand, stones, pieces of wood, etc. in the final layer of the adhesive. If you don't put any additives into the tile adhesive, it will probably end up grey. You can always paint it afterwards though with a non-toxic paint, and allowing at least 48 hours for it to completely dry in a well ventilated area.



It's really easy and quick to make (except for the time the tile adhesive needs to dry) and I'm sure your dragons will enjoy it and love you for it!

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Another Way To Make a Rock Hard Finish

A great base can be made with a coat of hardener (1:1:1 ratio mixture of white portland cement, fine silica sand and mineral oxide pigments on a bondcrete paste coat applied to the polystrene) which turns as hard as rock when it dries.

This coat makes a very realistic looking rock wall gives a great textured finish to the final wall. It looks more like sandstone and you can use different oxide pigments to get different colours.

This method also prevents cracking provided you do not use much foam filler. You will notice the wall below has little filler and has lots of foam pieces rather than gaps being filled with the expandable foam.



Some tips from someone who knows:

These tips come courtesy of Rob Leeds. Rob built a fantastic cage that has a wonderful rock wall. It took him some time but the results are truly worth it. This was written to someone asking Rob about how he did it and I thought they were worth repeating. Here are some of Rob's tips for you to enjoy and use.....

"I went to my basement, and pulled a bunch out of some old appliance boxes that had been saved. The styrofoam I used consisted of a lot of corner pieces, and odd-ball shapes & sizes. I brought it all up to the enclosure, and wondered what I was going to do next, and where I was going to start. After testing certain pieces in certain places, I realized that it was beginning to get too overwhelming, for I wanted a nice looking enclosure. I just kept second-guessing myself. Finally, I just said "SCREW IT" and started in one corner and went to the next.

I used a Hot Glue Gun to adhere the styrofoam to the plywood, and it worked. Great!! However, you must be careful, because the Hot Glue dries VERY quickly to the plywood, and after that, the styrofoam will not come off. I mean, you can break off as much as you can, but the actual section that is touching the glue is stuck.

In this stage, there is something that you must know. The more complex you make the styrofoam, the more difficult it will be to lay the grout. Like I said, I had all of these strange shapes & sizes, so there were many "Nooks & Crannies" that I had to fill in with grout. It was a nightmare. However, you do not have a huge enclosure, or, if you don't mind the extra work, the detail looks good.

After all of the styrofoam was in, I then got a knife helped round-out some of the corners and edges so that it looked more natural. I didn't want all of these 90 degree angles in there, for then it would look man-made. This is a messy step, for little pieces of styrofoam get everywhere.

The next thing I did was get out the Canned-Foam. You know, that stuff that they use for insulation or plumbing. Mark explains it in his plans. I then began filling in all of the "Nooks & Crannies" to help add to the natural look. Now, I had to use ALOT of this stuff because of my styrofoam, but you might not need as much, OR, you might need more. It all depends. I just kept going at it until I was happy with how it looked. If you put in any shelves, like I did, then you can squirt a bunch in one spot, and it will begin to drip. Depending on how much you put there, it will either drop before it completely dries, or, it will dry before it drops. You can always play around with it when it is still wet to make sure it doesn't fall. When these things dry, they look like natural stalagtites, as if they were hanging inside a cave.

Another thing that you want to remember in this "Canned-Foam" stage, is that it is not very compatible with the grout. You don't want to put a lot of this foam where there will be traffic by your reptile. When the grout dries, it will begin to crack on the Canned-Foam. AND, even if the grout didn't crack while it dried, when you come along to do the second, third or fourth coat of grout, it may crack as you brush it on. It is a little bit of a pain. I personally think that this is a Very Important Step in the entire process, for now

that my tank is complete and dry, I can still see some of these areas begin to crack. Putting grout on the styrofoam is not an issue, for it will absorb it, instead of reject it. Please keep this note in mind during your Canned-Foam stage.

After the foam had dried (The next day) I then went out and got some grout. If you go to a big enough hardware store you can choose between multiple colors. My first coat was actually a "Charcoal Gray" color, but then decided to change to the desert Red/Brown color. In any event, Grout is Grout. Seeing I had a lot of nooks & crannies to fill in, I mixed my grout to be very thin for the first few layers. I wanted it to be able to flow into all of the little holes & cracks. After the first coat, I just let it dry (another day). I then did another, and another, and another. During each coat, I could notice something that I missed on the previous coat. There was just so much to cover. This is when the extra support that I installed at the beginning came in handy. I would stand the enclosure on its side, on the other side, on the top, the bottom & back, o that I could get a good view at every angle. I still didn't get everything, but enough not to notice unless I really tried to look. (Trust me, your friends would never notice. They will be overwhelmed by the Enclosure itself)

Then the interior was finished. But please remember to still be careful when moving this thing around, or to it's final destination. Small shifts in the frame or plywood can make the coating of grout crack. When you get it to the final destination, you may want to check it over to see if you need to touch it up at all."

Thanks Rob.