Top 10 Tips for Working with Alginate-

Alginate can be lots of fun- and you can create some amazing sculptures with it. All this can be spoiled if you don't follow a few guidelines. This stuff really isn't covered in the instructions you get with your alginate. I thought you should know.

1) Choose the right formula

Alginate manufacturers make different alginates for different types of jobs these days. Do a little research to make sure you are using the one that has the best working properties for your job.

Make sure the alginate you choose has a long enough working time to complete your job. Its always better to have a little extra time than not to have enough.

2) Mix a small test batch first

Do this especially if you haven't worked much with alginate. Get a feel for how it mixes and how long your working time is. If it sets faster than you think it should, use cooler water than you did for the test batch. This could save the project.

3) Always mix a little more than you think you need

Alginate manufacturers will explain how to calculate the alginate required for your job. Do your research ahead of time to be ready. Then add about 10%- for safety. If you run out of alginate 90% of the way through your job, you'll regret it. Its always better to have a little extra alginate than to not have enough.

4) Weigh out your alginate

Alginate is a compressible powder so it can be at different densities at different times. This is why volumetric measurement is not a reliable method. If your alginate has a 4:1 water/powder mixing ratio, that means you'll need 4 times the weight of water as you do weight of powder. This is VERY different than 4 cups of water to 1 cup of alginate.

Luckily, you shouldn't have to weigh out your water. A pint (16 fl.oz.) of water weighs almost exactly one pound- certainly close enough for our purposes. So for every 4 pints (1/2 gallon) of water, you will mix in 1 pound of alginate powder.

5) Use a large enough mixing bucket

One thing that makes you feel really stupid is starting to mix your alginate and realize that your "mixing bucket" isn't big enough. It is impossible to mix the alginate vigorously enough without slopping water and powder all over the floor. My advice is to use a bucket that is at least twice as big as the amount of water you're using. If you're using 1/2 gallon of water- use at least a one gallon bucket (two would probably be better).

6) Check your water temperature

Alginate setting time is largely dependent on the temperature of the water you use to mix. Alginate manufacturers will tell you the recommended water temperature in their instructions. Unless you have a good reason to change the water temperature- don't. A good reason would be if you need more working time than the alginate gives you at the recommended temperature. Cooler water will extend the setting time and warmer water will shorten it.

7) Pour the water into the powder

DO NOT POUR THE ALGINATE INTO THE POWDER. This almost always ends up giving you a lumpy mix no matter how vigorously you stir it. Add the water- all at once, then mix the alginate. The only exception to this is next in #8.

8) Start by adding 90% of the water first

There is a secret to very, very smooth alginate and it is this: "Only add about 90% of your measured water at first". Mix this slightly thicker mix for about 1/2 the normal mixing time- then add the last 10% of the water. Continue mixing and you'll be surprised how much smoother the alginate ends up. Simple and effective.

9) Don't mix with your hand

Professionals do NOT mix alginate with their hand. It just doesn't agitate the alginate mixture sufficiently to produce an optimal product. Alginate mixed this way ends up lumpy and drippy. The finished casting ends up with small depressions in it corresponding to the little lumps in the alginate.

Use a kitchen whisk for alginate amounts up to about 1 pound and use a Jiffy Mixer on an electric drill for larger amounts. Remember to always run the drill in reverse (counter-clockwise) when using a Power Mixer.

10) Don't spend too long mixing

Amateurs often spend much longer mixing their alginate than they intend. Remember- the mixing time is included in the overall working time so spending too much time shortens the application time.

Inefficient mixing technique and being unfamiliar with alginate are the two main reasons that mixing might take longer than it should. Remember to mix vigorously- and keep an eye on the clock so you don't go overboard.

As always, this document was presented to you by Accu-Cast. (855) 773-0460