




Thank you for purchasing your alginate (pronounced "AL-jin-it") from Accu-Cast.

Mixing Guidelines for Accu-Cast Alginates

www.Accu-Cast.us

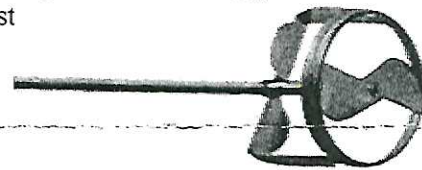
Alginate Product	Setting Time	Water Temp	Cooler Water	Slower Set
270-D	2 min	70°F	Warmer Water	Faster Set
370-SD	3 min	70°F	More Water	Slower Set
380-CC	3 min	80°F	Less Water	Faster Set
390-SD	3 min	90°F	Cool Room	Slower Set
570-PGV	5 min	70°F	Warm Room	Faster Set
590-IBG	5 min	90°F	IMPORTANT: * Alginate is NOT dimensionally stable over time. * It will shrink and distort. * Pour your casting material as quickly as possible.	
680-LS	6 min	80°F		
880	8 min	80°F		
570-GenesisV	5:30	70°F		
1070-GenesisX	10 min	70°F		

- **Basic Mixing Ratio**
4:1 Water to Powder (by WEIGHT)
- **Layup Mold Ratio (optional)**
3.75:1 Water to Powder (by WEIGHT)
- * Thinner mixtures will set slower and thicker ones will set faster.
- * We encourage you to experiment with different mixing ratios.
- * See the **Mixing Ratio Chart** on the back side of this sheet. 

MIXING

Technique #1- Power Mixing (Over 1 pound)

- * Get a paint mixer attachment (Jiffy Mixer) at accu-cast.us/accu-cast-alginates-lifecasting/products/i-know-what-i-want/lifecasting-tools/mixing-tools/ or at your local hardware or paint store
- * Attach the Jiffy Mixer to an electric drill.
- * Place alginate powder in mixing bucket.
- * Pour water onto alginate.
- * Lower the jiffy mixer into the bucket.
- * **Mix Slowly at first** until all the powder and water are mixed, then increase speed.
- * **Run the drill "backwards" or "counter-clockwise"**. The other way will whip lots of bubbles into the alginate.
- * Mix until smooth- usually no more than about 45 seconds.



Technique #2- Using a Kitchen Whisk (Up to about a pound)

- * Get a good sized metal whisk.
- * Put alginate and water into a large bowl. (Slanted sides are best. Plastic is better than metal or ceramic.)
- * Stir the alginate/water mix to incorporate the powder into the water.
- * Whisk the mixture vigorously like you were beating eggs until smooth- usually 45 seconds to 1 minute.



Technique #3- Mixing in a Plastic Bag (Up to about 2 pounds)

- * Measure out your alginate into a sturdy plastic bag (3 mil or so). We sell these bags on www.accu-cast.us.
- * Pour in the water.
- * Push out most of the extra air and tightly twist the bag closed.
- * Mash, squish, roll and knead the bag on a flat surface until the alginate is well mixed (1-2 minutes).
- * Turn the bag upside down with the open end inside your molding bucket.
- * Squeeze the mixed alginate into the mold bucket or into a bowl for face or body casting.
- * Throw the bag away when done. With this technique clean-up is a snap.



Notes:

DUST- Use a NIOSH approved class N95 "Nuisance Dust Mask" and Safety Glasses when mixing alginate.

CLEANUP- Alginate will not stick to non-porous surfaces but *will stick to cloth or carpet*. Remove alginate from buckets and mixing tools quickly to keep the alginate on them from drying and sticking.

How to use the handy “How Much Alginate Do I Need” Chart

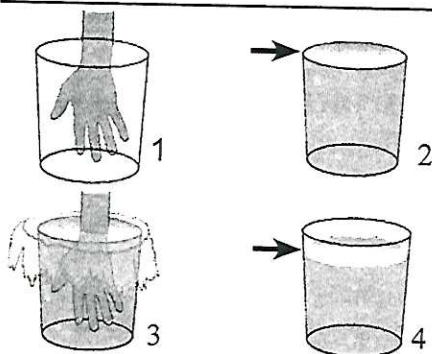
We recommend a Medium Mix (4:1- water to powder, by weight) for most applications. You may find you need a thicker or thinner mix for your application, but in general, a Medium Mix works very well for most.

For a Hand Cast in a Bucket:

1) Choose a container that you will be taking the hand cast in. Fill the container with water to the top. Put your hand(s) into the bucket and let the water overflow into the sink. What's left is how much water you'll be using.

We sell great Hand Casting Buckets on our website.
<http://accu-cast.us/lifecasting-tools/hand-casting-buckets/>

2) Measure the water.
 Figure out how many quarts and cups of water your bucket held **WITH** your hand(s) in.
 (4 cups equals one quart)

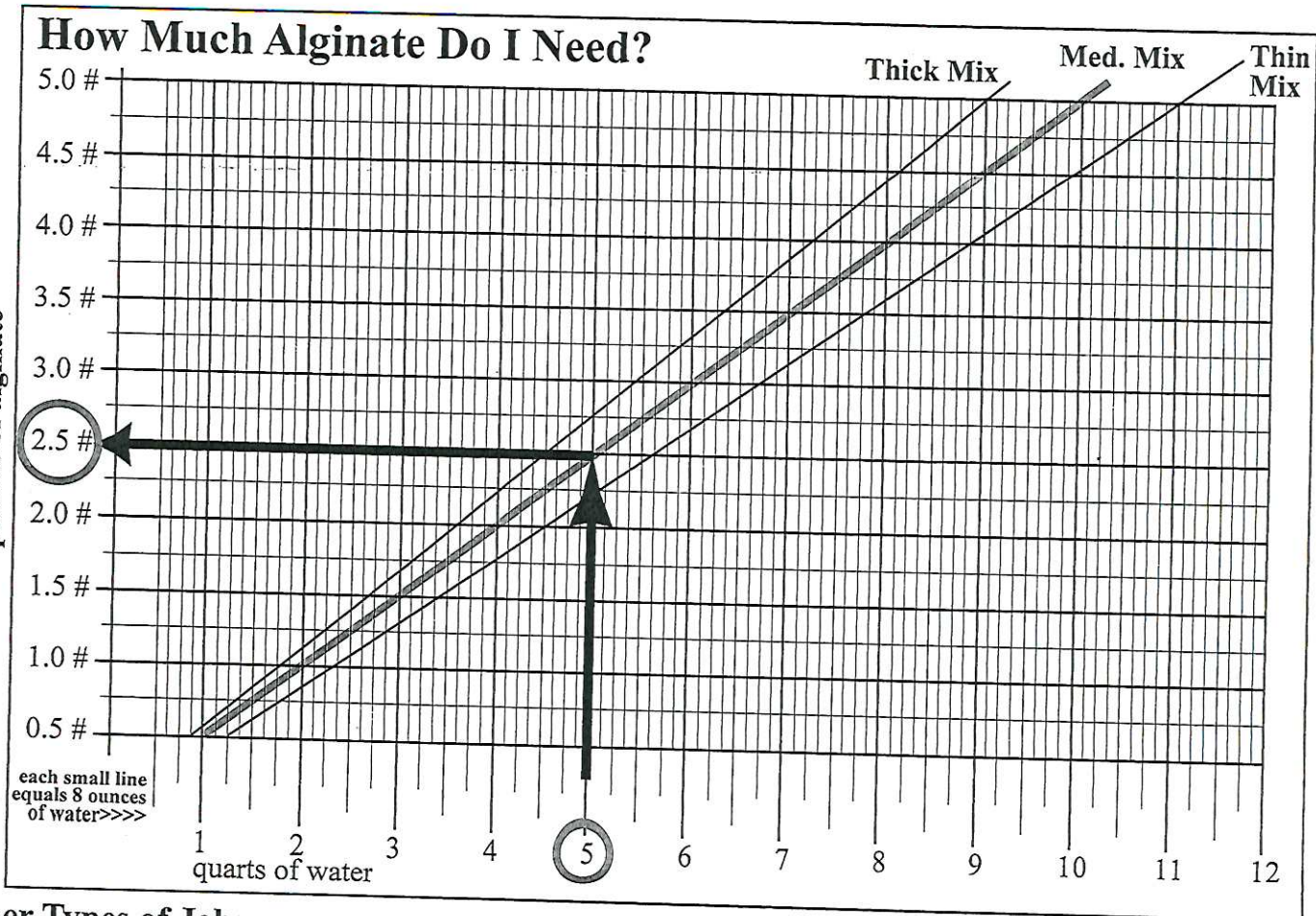


3) Look at the Chart below.
 Find your water amount along the bottom.

Follow the line up to the “Med. Mix” line.

Then follow the horizontal line left until you see how many pounds of alginate you'll need.

Example: 5 quarts water requires 2.5 pounds of alginate.



Other Types of Jobs:

Of course, if you want to mix a certain number of pounds of alginate, you can use this chart in reverse to determine how many quarts of water you'll need. A typical face cast requires about 1/4 pound (mix with 14 ounces water), an entire head about 1 1/4 pounds, and up to 2 pounds for a front or rear torso. If you're using 590-IBG, 680-LS or 880, we recommend a THICK. MIX.
 (www.accu-cast.us- (541) 388-1795)

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 WATER. 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

IMPORTANT NOTICE about YOUR WATER

Many places have less than perfect water coming from their taps. "Hard Water", Phosphates, and other minerals in the water CAN affect the way your alginate mixes and sets.

If you are concerned about your tap water in any way, please USE BOTTLED WATER to mix your alginate.

MOST people do not have problems, but *the quality of YOUR water is clearly beyond OUR control.*

Water with minerals in it can cause problems.

- Lumpy mix
- Long or short setting time
- Failure of the 380-CC alginate to turn pink

If you have hard water, you regularly use a water filter for your drinking water, or are in doubt- please do NOT use tap water to mix your alginate.

In these cases, we recommend using an inexpensive store-bought "Spring Water" or the equivalent. It does not need to be the expensive "de-ionized" water to be effective.

BE SURE TO ADD ALL THE WATER TO THE ALGINATE AT ONCE.

WATER to POWDER ratios

The most common mistake people make is not using the correct water measurements.

The BEST way to determine how much water to use with Accu-Cast alginates is to weigh everything out. We recommend 4 parts water to 1 part powder **by weight**.

If you **MUST** measure by volume, we recommend 3 parts water to 2 parts powder (3 cups water to 2 cups powder).

For our LifeCasting Kits, the correct water amounts are:

Kit	Alginate Water	Stone Water
Baby Hand	1 ¾ cups	3.5 fl oz (small cup enclosed in kit)
Child Hand	3 cups	1 cup
Adult Hand	12 cups	2 ¾ cups
Face	1 ¾ cups	½ cup (use the same for each bag of stone)
Head	7 cups	21 cups
Half Torso	6 cups	2 ½ cups
Full Torso	10 cups	4 cups
Foot	10 cups (use the same for each bag)	2 ¾ cups (use the same for each bag)

NOTE: Add ALL the water to the alginate at once. Mix for 45 seconds to 1 minute until pretty smooth.

Warmer water makes alginate set faster- cooler sets slower

Mixing alginate thicker than recommended makes alginate set faster.



Accu-Cast™

A50818

Prosthetic-Grade Alginate

Manufacturing Quality Materials since 1982

Depending on your application, Accu-Cast can be mixed in ratios between 2 to 1 and 5 to 1 (water weight to powder weight).

A good "average" consistency is about 4 to 1.

That would be:

4 ounces powder	16 fl.oz. water
8 ounces powder	32 fl.oz. water
16 ounces powder	64 fl.oz. water

NOTE: *If you are measuring by VOLUME:
Three 8 oz. cups of alginate = about 8 ounces*

If you do not have printed instructions, mixing guidelines can be found on our website- www.accu-cast.us