



# 370-SD™ Alginate

## Fast Curing Alginate for Socket Duplication

Accu-Cast™ 370-SD™ alginate is a fast curing, firm alginate mold material that is ideal for socket duplication in the creation of prosthetics and orthotics. This firm alginate can be poured into a prosthetic socket to assist in the fitment of artificial limbs. 370-SD™ has a set time of about 3 minutes when mixed with water that has a temperature of 70°F/21°C.

### TECHNICAL OVERVIEW

#### Accu-Cast™ 370-SD™ Alginate Specifications

**Mix Ratio by Weight:** 1 part powder to 4 parts water by weight

**Mix Ratio by Volume:** 2 parts powder to 3 parts water by volume

**Specific Volume:** 26 cu. in./lb

**Pot Life:** 2 minutes\*

**Cure Time:** 3 minutes\*

**Color:** Off-White

\*Depending on water quality (–see “Water Quality” section below) and water temperature set to 70°F/21°C

### PROCESSING RECOMMENDATIONS

**Safety** - Wear safety glasses to minimize contamination risk. Use only in a well-ventilated area. Wear a NIOSH-approved N95 dust mask when processing powdered material.

**Preparation** - These products have a limited shelf life and should be used as soon as possible. Materials should be stored and used in a warm environment (73°F/23°C). Mixing containers should have straight sides and a flat bottom. Mixing sticks should be flat and stiff with defined edges for scraping the sides and bottom of your mixing container. 370-SD™ powder may get warm in storage/shipping during the summer months which may cause the powder/water mixture to set too fast. To remedy, store 370-SD™ alginate in a cool area (60°F - 70°F or 16°C - 21°C) for 24 hours before using. Do not allow moisture to come into contact with unused 370-SD™ alginate powder.

Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.

#### Measuring, Water Quality and Water Temperature

**Measuring** - 370-SD™ is mixed 1 part powder to 4 parts water by weight or 2 parts powder to 3 parts water by volume. If measuring by volume, fill measuring cup with powder, and level off the top. If measuring by weight, use an accurate gram scale. You can vary the water level somewhat to change the consistency of the mixture. Less water will make the alginate thicker. More water will make the mixture thinner and easier to pour. **Be Careful... too much water may result in the mixture not curing!** Since powder is a compressible material, by weight mix ratio is recommended.

**Water Quality** - If water quality is in question, use distilled water heated to the correct temperature using a stove top or microwave oven if needed. Check water temperature using a thermometer. Water that has a high mineral content (calcium, phosphate, etc.) may cause any alginate to become “lumpy” or not set properly. If you have a water softener, the water will delay the pot life and cure time of the alginate. You can compensate for this by increasing the temperature of the water. A small-scale test is recommended prior to mixing large amounts.

**Water Temperature** - At 70° F / 21° C, 370-SD™ will have a working time of approximately 2 minutes and a demold time of about 3 minutes. Warmer water will cause the material to cure faster (less working time). Colder water will give a longer working time and slower demold time.

## Mixing Alginate

**Mixing** - Alginate can be mixed by hand in a mixing container using a flat mixing stick with defined edges for scraping the sides and bottom of your mixing container as you mix. Review the “hand mix” technique video at [www.accu-cast.us/alginatehandmix](http://www.accu-cast.us/alginatehandmix). Alginate material can also be mixed in the bag it comes in. Remove all jewelry and watches from hands before attempting to mix the material in the bag to prevent puncture to the bag. Review the “mix-in-bag” mix technique video at [www.accu-cast.us/alginatemixinbag](http://www.accu-cast.us/alginatemixinbag). Alternatively, you can mix the material using a turbine mixer (mechanical mixer) and portable drill. Review the “drill mix” technique video at [www.accu-cast.us/alginatedrillmix](http://www.accu-cast.us/alginatedrillmix). Wearing a NIOSH-approved N95 dust mask is recommended before mixing powdered alginate.

## Curing and Performance

**Curing** - Cure time is approximately 3 minutes when mixed with water at 70°F / 21°C. Thinner molds made with more water in the mix may set up longer. **Performance** - Cured alginate molds exhibit moderate tear strength and are firm but flexible. Alginate molds are easy to cut into with a dull knife to demold castings. Mold is temporary and must be used immediately.

## Safety First!

The material safety data sheet (MSDS) for this or any Smooth-On product should be read before using and is available on request. All Smooth-On products are safe to use if directions are read and followed carefully. **Keep Out of Reach Of Children.**

### Accu-Cast™ 370-SD™

**WARNING: IRRITANT TO EYES & MUCOUS MEMBRANES.** Do not get in eyes, or in mucous membranes. Do not take internally. Do not breathe particulates. Use only with adequate ventilation. Wear a NIOSH-approved N95 dust mask when using this product.

**First Aid:** In case of eye contact, flush thoroughly with water for 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting. Get immediate medical attention. If particulates are inhaled or if breathing becomes difficult, remove person to fresh air. If symptoms persist, get medical attention. **Keep Out Of Reach Of Children.**

**IMPORTANT** - The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.



**KEEP OUT OF REACH OF CHILDREN.**

**WARNING:** Known to the state of CA to cause cancer, birth defects or other reproductive harm.  
[www.P65Warnings.co.gov](http://www.P65Warnings.co.gov)



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