

Watertrap, Testing a New Product or the Continued Search for the Holy Grail

By David E. Parvin, A.L.I.

There are a number of problems that I have not been able to solve. I'm not talking about discovering the meaning of life or the composition of Dark matter; I'm referring to some things that I have tried as a sculptor to do but just haven't had the success that I want. When I have no challenges remaining, when I know everything and can do anything, I will have found the Holy Grail. Of course, I will always be grail-less. But every once in a while, I get one step closer. Using Watertrap allows me one such step.

Anyone who has done any significant casting of urethane knows that urethane and moisture are not compatible. The isocyanate in the urethane reacts with water to produce carbon dioxide. Rubber molds work just fine as long as they are dry. But attempting to cast urethane in an alginate mold is a different story; mixed alginate is about 75% water. The amount of CO₂ produced is inversely proportional to the setting time of urethane. Very fast setting urethanes generate far less gas than slow ones and come closer to casting acceptably. But in my experience, even the fastest setting ones still have too much surface distortion.

Recently, I was talking with Arnold Goldman of Monster Makers and the conversation came around to incompatibility of urethane and alginate, a completely logical direction for just about any conversation to take right after, How about them Denver Broncos. Arnold claimed to offer a product called Watertrap that eliminates the problem. I was skeptical but open minded enough to accept a free sample for evaluation. (One of the benefits that comes from writing articles is that people think you must be an expert and give you free things to try, alleluia!)

To test Watertrap, I mixed eight pounds of water and two pounds and two ounces of Artmolds' Fibergel; the ratio is four and three quarters ounces of alginate per pound of water. I made alginate molds of both hands of one of my assistances, Lauryn Harrow. (Those of you who are particularly well read on current events will recognize her name as one of the eight finalists to be the next new face and body for the 2004 Sports Illustrated Swimsuit Issue. One of the benefits that comes from writing articles is that even drop dead beautiful women think you must be an expert and are willing to work for you, alleluia!). Using Polytek's very slow pot life Easyflo 60, I poured about one hundred grams of part A in each



Lauryn's hand cast in urethane without Watertrap showing the rough surface.

of two plastic cups and equal volumes of part B. In a fifth cup I measured the same volume of Watertrap. Lauryn and I then mixed in A and B and at the same time the other A and B along with the Watertrap. I then poured both batches into the two alginate molds. The results were striking. The surface of the hand cast in the plain urethane looked like the surface of a golf ball and skin detail such as fingerprints was missing. The hand with Watertrap was almost perfect with clean fingerprints. Notice the photographs of Lauryn's hands. (By the way, if you would like to see more than just Lauryn's hands, see the Sept. 29 2003 issue of Sports Illustrated).

Let me point out a few observations: 1. Easyflo 60s components are very runny and mix together easily. Watertrap is a fine powder and requires some additional stirring in order to dissolve it smoothly into the urethane. I would suggest that one mix it into either the part A or B before mixing the two components since very fast setting urethanes leave little time for delays. Adding the

Watertrap only very slightly thickens the urethane mixture.

2. Anytime a powder is stirred into a liquid, some additional air bubbles will also be mixed into the liquid. With that in mind, I would suggest that the Watertrap be mixed into the part A which is thinner and more runny than the part B and from which the trapped bubbles can more easily rise to the surface and escape if allowed to sit for a few minutes before mixing with the B. If you have the capability, de-airing the part A and Watertrap solution will provide for an even more bubble free casting.



Lanryn's hand cast in urethane with Watertrap showing excellent detail.

3. Adding the Watertrap does not noticeably increase the volume of the mixture.

4. Watertrap being white does lighten the color of the mixed urethane but has almost no effect on its color once it has solidified.

5. The Watertrap batch had a very slightly longer setting time, about ten seconds more. Using a surface reading thermometer, I noticed that the temperature of the Watertrap batch was about ten degrees F cooler than the plain urethane at any point in time as they set up.

6. Note that I had not made any attempt to eliminate moisture from the inside surface of the molds. Further experiments demonstrated that using a hair dryer to dry the inside of the mold makes for even more perfect castings.

7. Just to cover all bases, I mixed a batch of urethane, Watertrap, and copper powder and got a very metallic looking hand.

8. While I had no way of testing to be certain, the Watertrap did not appear to have any effect upon the strength or hardness of the urethane.

9. I also tried mixing Watertrap into polyester resin and pouring it into an alginate mold. It didn't work; all I got was goo.

10. Apparently Watertrap has such affinity for water that it can bind with moisture in the air and can lose some of its effectiveness. Even if it has been kept in a tightly closed container, it may still absorb some moisture. I discovered that spreading it out on a pan and drying it at about 200 degrees F in an oven for a few minutes restored it to its most effective state.

Watertrap may be purchased from:

The Monster Makers

7305 Detroit Ave.

Cleveland, OH 44102

(216) 651-7739

monstermakerssales@monstermakers.com

As I said above, when I first heard of Watertrap, I was very skeptical, but it really does work. It is great to be one step closer to the Holy Grail, one step closer to perfection.

Photographs by: Elliot Summons

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