

The Effect of Water Purity on Alginate Mixes

The outcome of all chemical formulas is the sum total of their ingredients. Alginates are no exception. The chief ingredient of every alginate mix is water. When chemists formulate a product using water as an ingredient they use distilled or deionised water . . . that is, it is ultra pure knowing that contaminated water can negatively effect outcomes. However, when an alginate user combines their local tap water with the powder formula unexpected consequences can and do result.

For this reason most manufactures suggest testing by mixing a small batch before beginning a project. We are no exception. We have received calls from time to time from various parts of the U.S. where customers reported that either their mixture was lumpy (like oatmeal) or that the set times were considerably off.

The culprit was not mis-formulated alginate powder, but rather the minerals in the water that was used. Water with excessive calcium or phosphate will cause such mischief.

If you are in an area of hard water and are experiencing such difficulties this may be the cause. So if your mix is not what you expected, test it for water impurities by purchasing a bottle of distilled or deionised water at your local hardware store and make an experimental mix. But we caution that if you are tempted to go for those vanity-labelled bottled spring waters, certain brands also contain dissolved minerals.

If your budget cannot afford distilled water in large quantities, don't despair. You can make your own soft water using ArtMolds' AquaKlean®. To one gallon of hard water add 5% of AquaKlean by weight. Mix well and let stand for 12 hours. It is important to let the mixture sit that long so that the additive can do its work as it fully converts the offending minerals in your hard water. The result will be softer water that all your alginate mixes will love.

Generally water in most locations, though not completely pure, is acceptable enough to combine with most alginate formulations with the desired effects. Therefore, water modification can be ignored. If you are making an alginate mold in a new location however, it is always wise to test first so a project is not ruined.

If you have any questions we urge you to call our technical desk toll free at: 1-866-ARTMOLDS