

Article by Chris Peters [cpetersusa@gmail.com](mailto:cpetersusa@gmail.com)

**Durham's Rock Hard Water Putty®** [www.waterputty.com](http://www.waterputty.com) [info@waterputty.com](mailto:info@waterputty.com)

Durham's Rock Hard Water Putty has been produced since 1932. This product is sold as a repair material in a powder form. Just add water, mix and use it to repair furniture, patch plaster, stone and concrete, fill cracks and knotholes to name a few. It is often indispensable to woodworkers, electricians, carpenters, repairmen, homeowners, floor refinishers, cabinet makers, painters, not to mention plumbers.

For hobbyists and artists, Durham's Rock Hard Water Putty is useful for modeling, mold making and casting, sculpture and bas relief work, surface texturing, leveling, adding interior base weight and filling cracks and deformities.

#### **Characteristics:**

The primary ingredients are Plaster of Paris, Talc and Dextrin and the company indicates none of the ingredients are toxic. It does, however, contain crystalline silica at an amount of less than 1%. Avoid inhaling the powder, keep out of eyes and wash thoroughly after handling. A full Safety Data Sheet available at <https://goo.gl/jMXspv>.

Durham's Rock Hard Water Putty sticks and stays-put by a nearly indiscernible expansion as it dries. However, this expansion may cause the putty to "pop" from smooth concave surfaces. This particular situation on gourds may require some 'roughing-up'. Other noteworthy characteristics are: it does not shrink, it is not waterproof and it sticks well to itself.

The putty dries rock hard to a pale yellow/cream color. It can be colored by mixing in dry powdered tempera or by the addition of a water-based stain or latex paint or RIT® dyes. Do not use oil-based mediums. Too much coloring agent may affect the hardening process so experiment before you start your project. Hardened putty can be polished, varnished, waxed and painted. Once the putty hardens, stain will not penetrate it. It can be sawed, carved, drilled and sanded.

Durham's is available in 1 and 4 pound containers for approximately \$2.00 and \$8.00, respectively, and is usually found in the paint department of big box stores such as Lowe's and Home Depot.

#### **Directions for use:**

The area should be free of dust, grit and oil. Pour dry putty into a clean container and mix in water, a little at a time, until desired consistency is reached. Prepare only the amount needed at one time as the product sets up quickly. Open work time is approximately 40 to 60 minutes and it will be like hard soap in about 20 minutes which is actually a good time to start carving. Adding a small amount of vinegar in water at about a 50/50 ratio will retard the hardening time. When using a large mass of the material, it will take much longer to reach complete hardness. Total drying time depends on size, humidity and temperature. Allow about eight hours before sanding or drilling. The putty must be thoroughly dry before painting.

#### **Water to Powder Ratio:**

Mix the putty to the consistency of cream to pour into molds. Mix the putty somewhat thicker to apply a textured surface. For pouring into the bottom of a gourd or for leveling, mix it to thinner consistency. If necessary, recurring layers can be applied to achieve the thickness desired. It is best to apply multiple layers (a quarter inch or less at a time) and let each layer dry overnight between applications.

#### **Cleanup:**

Removing Durham's Rock Hard Water Putty can be difficult once it has dried and hardened and will require some effort, often by mechanical means. Therefore, it is best to do your mixing with disposable containers and stir sticks. Wash tools before the putty hardens and do not dispose of the leftovers in the sink or toilet.

