

## Mixing Casting Slip from Reclaim CLC Ceramics-David Bolton

1. Slake down bone dry reclaimed clay: porcelain or stoneware. Porcelain is best, since there is no grog, but even with the grog stoneware works too.
2. Fill 5 gallon bucket half way with reclaim. If you slake down bone dry porcelain in warm water and blend the following day the specific gravity will be pretty close to 1.75. If you wait the clay particles settle and push out excess water and it will be too thick.
3. Measure specific gravity. Calculate specific gravity by weight.
  - a. Use the following tools.
    - i. Gram scale
    - ii. 250 ml container.
  - b. Weigh 250 ml of water on a gram scale. (most likely it will weigh 250 g. at room temp, but not all measuring cups are accurate.)
  - c. Weigh 250 ml of slip on a gram scale. (It should weigh between 438 grams and 450.)
  - d. Divide the weight of the slip by the weight of the water. (The result should be between 1.75 and 1.80.)
4. Add more water if the specific gravity is above the 1.80 mark. Add more thick reclaim if it is below 1.75. Note: be sure to get all the air out of the slip or the weight will be off.
5. Add Darvan #7 until the viscosity is right. Use a small capful at a time. Don't go over! If you do you are in for some more work. The work would mean starting over and making more slip with right specific gravity and then adding it to the over deflocculated slip and repeating the viscosity test. Also, using too much Darvan will cause the slip to gel and it will not pour out of the mold.
  - a. Measure specific gravity using hydrometer by gently lowering the clean and dry hydrometer till the weighted end touches the slip. Let go of the hydrometer. Note the depth by grabbing the hydrometer and placing finger at the depth it sank. Wipe off slip and read indication. Wash and dry hydrometer to use again. Once the hydrometer reads right to match the weighing method then the viscosity will be right as well.
  - b. Another way of checking the viscosity if you do not have a hydrometer.
    - i. Use the following tools.
      1. 250 ml container.
      2. 2x10" PVC pipe with a 5/32<sup>nd</sup> hole drilled in the cap.
      3. Clock.
    - ii. Fill the pipe with slip and hold finger over hole.
    - iii. Remove finger and drain slip into 250 ml container while timing how long it takes. It should take approximately 25 seconds.
    - iv. If it takes longer add more Darvan in small amounts.
6. If using stoneware with grog and you wish to remove the grog, sieve the slip through the 100 mesh talisman sieve once it is thin enough to do so. Larger or smaller meshes may be used. The smaller the mesh the less grog you have, but the more difficult it will be to sieve. Note: Sieving out the grog will be hard work.
7. Test slip by trying slip in a proven mold. Make a note of the time it takes to cast, drain, and remove from the mold.