

Making Your Own Casting Slip from Existing Slurry

Tools Needed

Mask for safety, Buckets, Large Scale, Gram Scale, Drill with mixer bit & Pint jar or measuring cup

Weigh the Slip

First tare a bucket that is big enough to hold your slip on the large scale.

Mix your slip (add water if needed) in a second bucket until it is a very thick consistency.

Pour your slip into the bucket that is on the large scale and weigh it precisely.

Next tare your pint jar or measuring cup on the gram scale.

Weigh one pint of the slip.

Divide the weight of the bucket of slip by the weight of the pint to find out how many pints there are in the bucket.

(note: 454g in a pound)

Ideally your pint of slip will weigh between 750 and 850 grams.

Use the following procedure to determine how much water or dry material and deflocculants to add.

Note: Adding water will lower the weight per pint of your slip while adding dry material will raise it.

Adding Water:

If your pint of slip weighs more than 850 grams you will need to add water.

Mix your deflocculants with a small amount of water. The amount of water depends on how much slip you have. Add the water with deflocculant to the slip and mix well for several minutes. Weigh another pint of the slip. Add more water (no deflocculant) until the desired weight is reached.

Adding Dry Material:

If your slip weighs less than 750 grams you will need to add dry clay.

Add small amounts of dry material. Mix and weigh after each addition. Add deflocculants.

Note: you can either dry out some of the slip you are using and sieve to add dry material or you can add a prepared dry casting slip in the firing range of your slip. If you are not sure what firing range your slip will fire to, dry out a piece of the slurry and test fire it to find its firing range. You could also add kaolin or ball clay but testing would be advised.

Adding Deflocculants

Multiply the weight of the tared bucket of slip by 65% to find its dry slip content.

Multiply its dry slip content by 0.11% to find how much Soda Ash to add.

Multiply its dry slip content by 0.46% to find how much Sodium Silicate to add.

You will probably want to convert the bucket's weight into grams as the Soda Ash and Sodium Silicate will be weighed out on the gram scale. (note: 454g in a pound)

Add the deflocculants to water and mix well before adding them to your slip.

Mixing in the Ingredients

Ready your drill with the mixer bit. While mixing the slip slowly add the water or dry slip and then mix for several minutes. Make sure there are no lumps.

Next continue to mix with the drill and slowly add the deflocculants.

Mix for several more minutes.

For best results let sit overnight and mix again before using.

Of course weigh one pint of the new slip before using to double check your adjustments and additions.

Always mix your slip well before casting.

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