**intro:** Making black powder.
This instructable shows you how to make black powder for use in rocket motors and shells.

**step 1: Ingredients and equipment.**
The things you will need can be bought in supermarkets or garden stores. And a ball mill can be constructed easily, if this goes down well, I might enter a ball mill instructable.

1. Potassium nitrate/KNO3/salt peter
2. Sulfur/flowers of sulfur/dusting sulfur
3. Charcoal
4. Ball mill
5. Scales

The KNO3 is a garden fertilizer and can be bought at most gardening centers, as is the Flowers of sulfur, (its used to kill mites and acidify soil, so make sure you de-acidify it!)
Charcoal can be bought. Or if you have fireplace, or campfire the black brittle stuff is charcoal.
1. flowers of Sulfur (un-stabilised)
2. Stabilised, ground sulfur

1. solid charcoal from fireplace
2. ground charcoal
**step 2: grinding and prep.**
1. Put 75g of KNO3 into the ball mill and run until twice as fine, about 2 hours.
2. Empty mill. Crush 15g of charcoal between 2 pieces of paper and then grind in ball mill until powdery.
3. If using Flowers of sulfur, mix 100g with 10g of stabilizer to remove acidity (like ground calcium carbonate (chalk) or lime chloride) because if acidic the BP may spontaneously combust.
4. Then combine the KNO3 with the Charcoal, and 10g of the sulfur mix in the ball mill until at a consistent fine-ness, about 1 hour.
5. in short, 75g of fine KNO3 with 15g of fine charcoal, with 10g sulfur powder=BP

**step 3: Bentonite clay.**
Although not black powder, this bentonite clay can be used in rockets as an efficient way of crating a nozzle and bung in a black powder powered rocket.

Put 1 cup of the Cat litter (must be in-organic clumping type) in a ball mill and grind for 2 hours, or grind in other machine until powdery. When rammed this will become solid, because this Cat litter is mainly Bentonite clay.

This isn't nearly as difficult as it may sound. and because this doesn't expand when rammed or contract later, and sets hard quickly it is a cheap and quick way of creating bungs and nozzles.

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