

191.Flash Powder

By Dr. Tiel

Here are a few basic precautions to take if you're crazy enough to produce your own flash powder:

- 1.Grind the oxidizer (KNO₃, KClO₃, KMnO₄, KClO₄ etc.) separately in a clean vessel.
- 2.NEVER grind or sift the mixed composition.
- 3.Mix the composition on a large paper sheet, by rolling the composition back and forth.
- 4.Do not store flash compositions, especially any containing Mg.
- 5.Make very small quantities at first, so you can appreciate the power of such mixtures.

KNO₃ 50% (by weight)
Mg 50%

It is very important to have the KNO₃ very dry, if evolution of ammonia is observed then the KNO₃ has water in it. Very pure and dry KNO₃ is needed. KClO₃ with Mg or Al metal powders works very well. Many hands, faces and lives have been lost with such compositions. KMnO₄ with Mg or Al is also an extremely powerful flash composition. KClO₄ with Al is generally found in commercial fireworks, this does not mean that it is safe, it is a little safer than KClO₃ above. K₂Cr₂O₇ can also be used as an oxidizer for flash powder. The finer the oxidizer and the finer the metal powder the more powerful the explosive. This of course will also increase the sensitivity of the flash powder.

For a quick flash small quantities can be burnt in the open. Larger quantities (50g or more) ignited in the open can detonate, they do not need a container to do so.

NOTE: Flash powder in any container will detonate.

Balanced equations of some oxidizer/metal reactions. Only major products are considered. Excess metal powders are generally used. This excess burns with atmospheric oxygen.

- $4 \text{ KNO}_3 + 10 \text{ Mg} \rightarrow 2 \text{ K}_2\text{O} + 2 \text{ N}_2 + 10 \text{ MgO} + \text{Energy}$
- $\text{KClO}_3 + 2 \text{ Al} \rightarrow \text{KCl} + \text{Al}_2\text{O}_3 + \text{Energy}$
- $3 \text{ KClO}_4 + 8 \text{ Al} \rightarrow 3 \text{ KCl} + 4 \text{ Al}_2\text{O}_3 + \text{Energy}$
- $6 \text{ KMnO}_4 + 14 \text{ Al} \rightarrow 3 \text{ K}_2\text{O} + 7 \text{ Al}_2\text{O}_3 + 6 \text{ Mn} + \text{Energy}$

Make Black Powder first if you have never worked with pyrotechnic materials, then think about this stuff.

Dr. Van Tiel - Ph.D. Chemistry

Potassium perchlorate is a lot safer than sodium/potassium chlorate.

192.The Explosive Pen

by Blue Max

Here's a GREAT little trick to play on your best fiend (no that's not a typo) at school, or maybe as a practical joke on a friend!

Materials Needed:

- 1.One Ball Point "Click" pen
- 2.Gun Powder
- 3.8 or 10 match heads
- 4.1 Match stick
- 5.a sheet of sand paper (1 «" X 2")

Directions:

- 1.Unscrew pen and remove all parts but leave the button in the top.
- 2.Stick the match stick in the part of the pen clicker where the other little parts and the ink fill was.
- 3.Roll sand paper up and put around the match stick that is in the clicker.
- 4.Put the remaining Match Heads inside the pen, make sure that they are on the inside on the sand paper.
- 5.Put a small piece of paper or something in the other end of the pen where the ball point comes out.
- 6.Fill the end with the piece of paper in it with gun powder. The paper is to keep the powder from spilling.

The Finished pen should look like this:

Small Paper Clog Gun Powder Matches & Sandpaper \