Smoke Grenade

A Smoke grenade is a pyrotechnic device that could conceal the getaway route, or cause a diversion, or simply provide cover. Such a device, were it to produce enough smoke that smelled bad enough, could force the evacuation of a building, for example. Smoke bombs are not difficult to make. Although the military smoke bombs employ powdered white phosphorus or titanium compounds, such materials are usually unavailable to the public. Instead, he/she would have to make the smoke bomb for themselves.

Most homemade smoke bombs usually employ some type of base powder, such as black powder or pyrodex, to support combustion. The base material will burn well, and provide heat to cause the other materials in the device to burn, but not completely or cleanly. Table sugar, mixed with sulfur and a base material, produces large amounts of smoke. Sawdust, especially if it has a small amount of oil in it, and a base powder works well also. Other excellent smoke ingredients are small pieces of rubber, finely ground plastics, and many chemical mixtures. The material in road flares can be mixed with sugar and sulfur and a base powder produces much smoke. Most of the fuel-oxidizer mixtures, if the ratio is not correct, produce much smoke when added to a base powder. The list of possibilities goes on and on. The trick to a successful smoke bomb also lies in the container used. A plastic cylinder works well, and contributes to the smoke produced. The hole in the smoke bomb where the fuse enters must be large enough to allow the material to burn without causing an explosion. This is another plus for plastic containers, since they will melt and burn when the smoke material ignites, producing an opening large enough to prevent an explosion.

Smoke Bomb Recipes

RECIPE#1

SIMPLE SMOKE

The following reaction should produce a fair amount of smoke. Since this reaction is not all that dangerous you can use larger amounts if necessary
6 pt. ZINC POWDER
1 pt. SULFUR POWDER

Insert a red hot wire into the pile, step back.

RECIPE#2

THE BACKYARD STORM

Step 1:
Ingredients…… Sugar and Potassium Nitrate (aka Saltpeter) If you can't find saltpeter at a store, you can buy it online.

Step 2: The ratio is 3:2, Very simple. In separate containers or cups

Saltpeter = 30 grams
Sugar = 20 grams

Note: You can use any amount you want like teaspoons, cups, etc. Just keep the ratio the same.

Example: if you use 3 teaspoons of saltpeter, then use 2 teaspoons of sugar.

Step 3: Mix the measured saltpeter and sugar together in one cup.

Step 4: Take some tinfoil and make a box:

Picture 1

Tear a piece of aluminum foil

Picture 2
Fold it in half

Picture 3
Fold it in half again

Picture 4
Now make a pan.

Note* the "Pan" is not the only way to cook the mixture, you can also use a glass bowl or cylinder to cook in, but the glass will be rendered unusable after.

Step 5: Pour the mixture in the made pan:

Step 6: COOK **(PLEASE DO THIS OUTSIDE)**

This is the hard part. The mixture must not burn, because it can catch fire and smoke will be everywhere.

Put the mixture on a frying pan over a burner and watch and stir. NEVER LEAVE ALONE

The mixture will turn to an orange-ish color. When that happens, take the mixture off the flame or simple turn the flame off. Continue stirring for it will still be cooking.

Presto, You have a smoke bomb sheet.

Break off little pieces or use the whole thing. THIS WILL SMOKE OUT YOU YARD.

Step 7: LIGHTING

Lighting 1: To light just hold a match to it or a lighter until it starts smoking. Then GET AWAY! While it's smoking it will send off molten sugar that will burn you. This is why I suggest the next way to light.

Lighting 2. Make a small semi circle with tinfoil and then light or use a fuse from a firecracker. The fuse must be the green type. Or if you are really good, you can make a wax ball and put the stuff inside then place the fuse in and light. Be sure to dig a hole in to the center so the fuse goes deep in the mixture to light.

RECIPE#3

A white smoke bomb can be made from sulfur, potassium nitrate, black powder, aluminum powder, iron oxide and carbon tetrachloride. It can be used either for signaling or screening.

Materials Required

Sulfur, Potassium Nitrate, Black Powder, Aluminum Powder, Black Iron Oxide, Carbon Tetrachloride, White Flare Mix (described later), Tablespoon, Wooden Stick, Newspaper, Quart Jar with Lid, Window screen, 10inch Fuse, 2 and half inch by 5 inch tin can and a lighter.

Procedure

Measure 3 level tablespoons of dried sulfur into the quart jar. Add 4 level tablespoons of dried potassium nitrate to the sulfur. Add two heaping tablespoons black iron oxide. Place all ingredients on the window screen. Mix ingredients thoroughly by sieving them onto the newspaper, repeat this 3 times. Pour the ingredients back into the jar. Screw the lid on the jar tightly and mix the ingredients vigorously until even. Remove the lid and add 10 heaped tablespoons of aluminum powder then mix thoroughly with the wooden stick. Store in the jar with tightened lid until use.

Usage

Wet the ingredients in the jar to a paste consistency with Carbon Tetrachloride, do this in a well-ventilated area, as the Carbon Tet will give off toxic gases. Add a half cup of black powder to the paste and mix carefully with wooden stick.

Measure one heaped tablespoon of white flare mix onto a four inch square aluminum foil. Knot one end of the fuse and place in the middle of the white flare mix. Fold the corners of the foil tightly around the fuse.

Place the white smoke bomb mix into the can. Place the fused white flare device into the can just below the surface of the smoke bomb paste and ignite the flare to deploy the smoke bomb.

Ultimate Colored Smoke Bomb

Might be hard to get some of the chemicals

Make Dense Clouds of Colored Smoke

The classic smoke bomb is a great project for the home or lab, producing lots of safe smoke, with purple flames. If you get dye and consider the shape of your creation, you can make a smoke bomb that billows clouds of brightly-colored smoke. This project is easy and safe enough to at home. Adult supervision is required.

Colored Smoke Bomb Materials

1. 60 g (3 tablespoons) potassium nitrate (sold as saltpeter in garden supply shops)
2. 40 g (2 tablespoons) sugar
3. 1 teaspoon baking soda
4. 60 g (3 tablespoons) powdered organic dye (found in laundry sections of the store as well as craft & hobby shops)
5. cardboard tube (best is an iced push-pop tube (eat the treat first), or you could use a toilet paper roll or section of paper towel tube, or even a rolled/taped paper tube)
6. Duct tape
7. Pen or pencil
8. Firework fuse (hardware, rocketry, construction, or hobby shops, or scavenge it from a firework)
9. Cotton balls
10. Saucepan

Make the Colored Smoke Bomb Mixture

1. Mix 60 g potassium nitrate with 40 g sugar in a saucepan over low heat. It's a 3:2 ratio; so if you don't have grams, use three large spoonfuls of potassium nitrate and two large spoonfuls of sugar (3 tablespoons and 2 tablespoons, if you feel the need to be precise).

2. The sugar will caramelize and brown. Stir the mixture continuously until it resembles smooth peanut butter.

3. Remove the mixture from heat.

4. Stir in a spoonful of baking soda (rounded teaspoon is fine). The baking soda is added to slow down the combustion when the smoke bomb is ignited.

5. Add three large spoonfuls (3 tablespoons) of powdered organic dye. Blue dye and orange dye are said to produce better results than the other colors. Stir to mix well.

6. Construct the smoke bomb while the mixture is still hot and pliable.

Assemble the Smoke Bomb

1. Fill a cardboard tube with the warm smoke bomb mixture.
2. Push a pen or pencil down into the center of the mix (doesn't have to be all the way to the bottom but should be enough that the pen stands in the mixture). You could use a different shape, but the cylinder works really well.
3. Let the mixture harden (about an hour).
4. Remove the pen.
5. Insert a firework fuse. Push pieces of cotton balls into the hole to tamp the fuse securely inside the smoke bomb. Be sure there is fuse left outside of the tube so that you will be able to light your smoke bomb. There is also a nifty pull ring fuse that can be constructed here is the link to the website that has a video of how to make it
   http://myspacetv.com/index.cfm?fuseaction=vids.individual&videoid=16435609
6. Wrap the smoke bomb with duct tape. Cover the top and bottom of the tube, too, but leave the hole area with the cotton and fuse uncovered.
7. Go outside and light your smoke bomb!

COLORED FLAMES

Colored flames can often be used as a signaling device for terrorists. By putting a ball of colored flame material in a rocket; the rocket, when the ejection charge fires, will send out a burning colored ball. The materials that produce the different colors of flames appear below.

COLOR	MATERIAL	USED IN
red	strontium salts (strontium nitrate)	road flares, red sparklers
green	barium salts (barium nitrate)	green sparklers
yellow	sodium salts (sodium nitrate)	gold sparklers
blue	powdered copper old pennies	blue sparklers,
white	powdered magnesium or aluminum	firestarters, aluminum foil
purple	potassium permanganate	purple fountains, treating sewage

How to Make a Flare

An improvised white flare can be made out of potassium nitrate, aluminum powder and shellac. It has a time duration of about two minutes.

Materials Required

Potassium Nitrate Powder, Aluminum Powder, Shellac, Quart Jar with Lid, 15 inch fuse, wooden stick 1/2 inch thick, Tin can 2 and half inch and 5 inch long, Flat window screen and a wooden block.

Procedure

Place the Potassium Nitrate crystals on the screen and rub back and forth with the wooden block until processed into a fine powder. Measure 21 tablespoons of the Potassium Nitrate and add 21 tablespoons of Aluminum powder both into the jar. Cover the jar with the lid and shake vigorously until even. Add 12 tablespoons of shellac and stir with the wooden stick until even. Cover tightly with lid until use.

Usage

Knot one end of the fuse. Wrap the fuse at the base of the can with the knotted end in the center. Pour in the white flare powder over the fuse and ignite the fuse to deploy within three weeks.

White flares are commonly used for signaling in low light environments.