Conductive Hot Shot Mix Procedure

By QuickBurst

Read Me

Caution:

Do not use this product in a manor inconsistent with its labeling. This product is to be used for lighting armature or Hobby rocket motors only.

The mix is flammable and will burn energetically. Do not mix near any source of heat or flame. If you smoke, don't smoke around any flammable material. Always avoid mixing oxidizers and fuels in a dry state, always wet with the required fluid. Dry mixes are capable of spontaneous combustion. Use only wooden stirs, do not use metal. Use only Acetone do not use any other solvent.

Your package contains:

1 - 2 ounce white plastic jar labeled Conductive Hot Shot Mix containing the fuel composition.

1 – Small bottle of binder.

1 – Small bag of oxidizer with desiccant pack.

Note: You are mixing a flammable compound treat it like gasoline. Mix in a well ventilated room and avoid breathing vapor. Do not smoke or have any heat source within ten feet. At this point the mix is flammable.

Needed:

Acetone and wire, acetone is hygroscopic always use acetone that has been kept tightly sealed, FYI … Your wife's fingernail polish will not work. I suggest shooter wire, lamp cord, fireworks wire … it has many names.

Procedure:

Open binder jar and pour into the 2 ounce white plastic jar labeled Conductive Hot Shot Mix. Once empty fill the bottle half full of acetone, cap and shake well. Empty the bottle into your white mix jar. This makes sure you introduced all of the binder.

Use a wooden stir stick and stir well, it will be a very black viscous mixture. Don't get any on you, it's messy and will stain anything it touches.

Open Oxidizer pack, remove the desiccant pack and discard, a good suggestion is to use tweezers to remove the pack. After desiccant pack is removed reseal the bag containing the oxidizer. Try to remove any air that is trapped in the bag. Roll a pencil or other small round object over the sealed bag to remove any lumps. You want the oxidizer to be a fine powder with no lumps.

Add the oxidizer to the 2 ounce white plastic jar labeled Conductive Hot Shot Mix. Stir well, stir till you see an even color throughout, no white streaks or rocks.

The mix should be the consistency of maple syrup. If thinning is needed use acetone and acetone only. Acetone is available at most Hardware or Home Improvement stores. If it's too thick add acetone, if it's too thin blow lightly over the jar while stirring.

Disposal:

Dispose of any unwanted compound in copious amounts of water.

Dipping lead wires:

The best bet is to use Twin conductor lamp cord (fireworks wire). For large starters use 24 AWG. For smaller starters use 26AWG. When the lamp cords is stripped you have the exact spacing between the two conductors, about 1/8".

Strip about ¼" of insulation from one end, exposing the two conductors, this is the end you will be dipping. Lower the bare wires into the mix. Swish back and forth in order to fill the gap between the two conductors. You want the compound to form a web between the wires. You will learn as you go exactly how much dip is needed for the starter to perform to your satisfaction. Small motors need small starters, large motors need large starters. Re-dip to increase the size if needed. You can add layers with no problem. Stir the mix as you work. Shooter wire is available at www.quickburst.net or https://electricmatch.com/pyrotechnics/see/4/5/seminole-duplex-wire

Let the finished starters dry overnight.

Testing: After your starters have dried it's a good idea to check each one for continuity. Strip the other end of your lead, using your Multimeter or some other instrument capable of performing the test. Test each starter for continuity. Any that do not pass need to be discarded using the procedure described above. You can also remove the dip and reuse the lead.

If you measure resistance you should get something between 6 and 10 Ohms. If you readings are outside this range by more than five Ohms I'd bench test. If the starter fires then record your results and redefine the range. A resistance measurement does not necessarily determine a good starter from a bad starter, while a continuity check will. No continuity guarantees the starter will not fire. The suggested resistance range was determined by an average of 6 random samples. I performed my bench testing with a 9 volt Duracell and an automotive battery. Every starter I bench tested fired as designed.

Uses: You can use the conductive mix as a primer. Meaning, finish the starters then follow with a coat of QuickDip. This will make a larger hotter starter.

The compound will most likely not make e-matches for use in avionics (altimeters). For something that critical to a safe flight I suggest you use commercial e-matches only. Most timers will fire your Hot Shots fine, this of course depends on the firing current supplied. Always bench test to be sure.

Dip other manufacturers' starters to greatly improve dependability. Be sure to dip only the tip. The compound is a bit fragile. If used on small black powder motors avoid the motor plug designed to secure the starter. Instead use a small piece of masking tape as a retainer. Use for clustered black powder or high power flights. The Hot Shots were primarily designed for use in black powder motors, particularly clustered motors. Use your imagination, there's no telling what you're capable of. I'd guess you could cluster twelve or more using a 12 volt club type launch control. As always, bench test to be sure. If the finished starter seems a little soft you can add a coat of fingernail polish (red is nice) and harden them a bit, 10% Nitrocellulose lacquer, or a 10% solution of Ping Pong balls dissolved in acetone.

The mix will dry out in storage. If this happens, add acetone, let it sit a few minutes and stir to break the clumps. Add acetone as needed. Store your bottle of mix inside a Mason jar, these jars have good seals and will slow evaporation. Acetone will evaporate no matter what you do. Some folks open the jars monthly and add a bit of acetone then stir.

To order more see: http://www.quickburst.net/new_hot_shot_page.htm

This product it to be used for model rocketry ignition only.

Hot Shot Conductive mix starters are a bit delicate, best bet is to give them a quick cover of nail polish or Nitro Cellulose. This will make them much more durable.

Thank you for your support

QuickBurst979-373-6601

Email to info@quickburst.net