

Storage and Handling

Store AeroTech rocket motors in a dry place where the temperature will remain between 45°F and 100°F. Do not cut, saw, attempt to alter the size, attempt to disassemble, attempt to modify, or drop an AeroTech rocket motor. Do not use an AeroTech rocket motor that you believe has been damaged in any way. Do not ignite an AeroTech rocket motor indoors. Do not breathe fumes from the rocket motor exhaust.

First Aid

For a minor burn, apply a burn ointment. For a severe burn, immerse the burned area in ice water at once and see a physician as quickly as possible. In the unlikely event of oral ingestion of the propellant, induce vomiting and see a physician as quickly as possible. The composite propellant used in AeroTech rocket motors consists primarily of Ammonium Perchlorate and a rubber-like plastic elastomer. Redline™ propellant also contains Strontium Nitrate.

Disposal

Pack motor firmly in hole in ground so that only the nozzle is exposed, in a remote area away from people, animals, buildings and flammable materials. Ignite motor electrically from a distance of 50 feet or more. Propellant and smoke charge will burn until consumed. **Wait 5 minutes** and then dispose of the motor casing in inert trash.

Fire Safety

AeroTech composite rocket motors will normally not ignite unless subjected to direct flame. Use water to fight any fires in which AeroTech rocket motors may become involved: Direct the water at the AeroTech rocket motors to keep them below their 550 deg. F autoignition temperature. Foam and carbon dioxide fire extinguishers will NOT extinguish burning propellants of the type used in AeroTech rocket motors. Keep rocket motors away from flames, sources of heat and flammable materials.

Disclaimer and Warranty

NOTICE: As we cannot control the storage and use of our products, once sold we cannot assume any responsibility for product storage, transportation or usage. RCS shall not be held responsible for any personal injury or property damage resulting from the handling, storage or use of our product. The buyer assumes all risks and liabilities therefrom and accepts and uses AeroTech/RCS products on these conditions. No warranty either expressed or implied is made regarding AeroTech/RCS products, except for replacement or repair, at RCS's option, of those products that are proven to be defective in manufacture within one year from the date of original purchase. In no case will AeroTech warranty a product more than five (5) years after the date of manufacture. For repair or replacement under this warranty, please contact RCS. Proof of purchase will be required. **Note:** Your state may provide additional rights not covered by this warranty.



75mm DMS™

Disposable Motor System™ Single-Use Rocket Motor Assembly & Operation Instructions

DO NOT OPEN ROCKET MOTOR PACKAGING UNTIL READY TO USE

Note: Motor designation and complete performance specifications (including a sample time-thrust curve) are printed on the DMS motor label and packaging.

WARNING-FLAMMABLE: Read Instructions Before Use. Use only in accordance with instructions. Do not smoke near rocket motors and keep away from open flames and other heat sources. Sale to persons under 18 years of age prohibited by federal law. 'H' and higher power motors for use only by certified flyers. Ignite by electrical means only.
CAUTION: Keep out of reach of children. Motor is hot after firing.

Before You Begin:

- Do not modify the motor in any way.
- If any parts are missing or damaged, please call AeroTech at **435-865-7100**.

Package contents:

1. 75mm DMS motor case & liner assembly
2. 75mm DMS propellant grains
3. Forward smoke bulkhead with pre-installed O-ring
4. O-ring and igniter kit

Other items needed:

1. Flat blade screwdriver
2. Epoxy stir stick
3. Hobby knife or scissors

1. General Motor Assembly

1.1 Insert the propellant grains into the case and liner assembly, placing a 2-1/2" X 1/16" (thinner) grain spacer O-ring between each grain.





1.2 Insert the larger end of the smoke bulkhead with the pre-greased O-ring into the open end of the liner. Use a twisting motion to ensure the bulkhead flange is seated completely against the liner.



1.3 Raise the motor assembly into a vertical position and ensure that the bulkhead and liner assembly is fully seated in the case and against the nozzle. The larger diameter of the bulkhead should now be flush with the end of the case. Place the 2-3/4" X 1/8" (thicker) forward O-ring into the space between the smoke bulkhead and the case. **CAUTION: Do not** apply any grease to the forward O-ring and do not allow any oil or grease to contact the interior abraded end of the case.

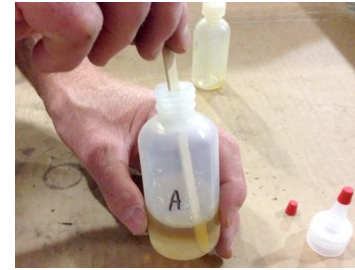


1.4 Using a stir stick or a flat blade screwdriver, push the forward O-ring completely into the groove between the smoke bulkhead and the case. **CAUTION: Do not** allow any oil or grease to contact the interior abraded end of the case.

2. Mixing and Applying the Forward Bulkhead Epoxy



2.1 Remove the screw-on caps of the supplied epoxy bottles and dispense the contents of the smaller hardener bottle into the larger resin bottle. Allow the hardener bottle to drain into the resin bottle for 30 seconds.



2.2 Using a stir stick, thoroughly mix the resin and hardener combined in the larger bottle.



2.3 Replace the screw-on cap of the larger bottle and dispense enough of the mixed epoxy into the space between the smoke bulkhead and the case to fill it completely. Secure the completed motor assembly to a stable, solid object (such as a table leg) in a vertical position and allow it to cure for at least 16-24 hours prior to use.

3. Igniter Installation and Preparation for Flight

CAUTION: Install the igniter in the motor only when the rocket is at the pad and ready for launch.

3.1 Remove the supplied FirstFire™ igniter from the cardboard tube and straighten the leads.

3.2. Strip 1/2"-1" of insulation from the ends of the leads.



3.3 Insert the black-coated end of the igniter into the nozzle opening and push it completely into the motor core, until the coated end is touching the smoke element in the motor bulkhead.

3.4 Using a hobby knife or scissors, cut a corner off the end of the nozzle cap (if supplied) to produce a vent hole in the cap about 1/8"-1/4" wide.

3.5 Press the open end of the nozzle cap over the exposed nozzle extension to hold the igniter firmly in place.

3.6 Install the motor into the rocket's motor mount tube. Ensure that the motor is securely retained in the rocket by using positive mechanical means to prevent it from moving under thrust or during recovery system deployment.

3.7 Prepare the rocket's recovery system and then launch the rocket in accordance with the National Association of Rocketry (NAR) and/or Tripoli Rocketry Association (TRA) safety codes. **Note:** After use, the rocket motor casing may be disposed in inert trash.