A-Gas RemTec asks that all initiators, blasting caps, squibs, gas cartridge actuators, and all other explosive devices be removed from all system bottles prior to shipment to A-Gas RemTec. Failure to remove these devices prior to shipment to A-Gas RemTec will result in additional handling and disposal fees.

Device Description:
Fenwal electric initiators are aluminum detonators with attached insulated copper leg wires, with primary and secondary explosive powders contained within a small shell at the end of the wires. These devices are comprised of copper, aluminum, PETN (pentaerythritol, tetranitrate) lead azide and lead salt. This device is designed to operate by electrical input from a Fenwal system controller. Operation of the actuator occurs when the electric current is sent through the bridge wires causing an exothermic chemical reaction. This generates the necessary pressure to open the rupture disc and discharge the suppressant agent.

These devices may detonate if exposed to two-way radio transmission, low level electrical current, impact, static, heat or shock. **Do not** fight fires involving explosives. Isolate the area and evacuate personnel to a safe place as explosive detonation can occur.

Prolonged or repeated contact with post-function gases and particulates may result in eye irritation with discomfort, tearing and blurring of vision or skin irritation resulting in discomfort or rash. If ingested, core materials may be poisonous or cause respiratory tract irritation. **Ingestion** of lead and lead compounds may cause lead poisoning. Ingestion of particulates would primarily target the gastrointestinal tract, central nervous system, kidneys, blood and gingival tissue. Symptoms of this include but are not limited to weakness, insomnia, facial pallor, weight loss, abdominal pain, colic and anemia. **Inhalation** of lead and lead compounds at high levels can cause acute or chronic symptoms ranging from eye and skin irritation to permanent brain damage, vomiting and convulsions. Because PETN is a vasodilator the effects of exposure can result in headaches, weakness and a fall in blood pressure. Overexposure can result in additional nasal and respiratory irritation.

**Recommended PPE (Personal Protective Equipment):**

- Safety glasses
- Grounding devices (grounding straps and/or conductive footwear)
- Protective rubber gloves and respiratory protection from dust, mist, and fumes is recommended for handling post-detonation materials.

**Summary of Procedure – Removal From Fenwal System Bottle:**

(A more detailed procedure with photos follows)

*Note on Fenwal Electric Initiators:* Fenwal Initiators are subject to federal ATF (Alcohol, Tobacco, and Firearms) licensing regulations, and may be subject to local and state regulations, depending on geographic location. Only properly trained and licensed individuals should handle these devices.

1. First and foremost, determine whether or not an initiator is even installed on the bottle. If there is an initiator installed, consult the remainder of this procedure for safe removal.
2. Prior to removing the initiator from the Fenwal system bottle, the device must be properly shunted according to the following procedure to prevent accidental discharge:
   a. Place a piece of aluminum foil between the pins in the device well.
      i. The foil should make contact with all of the pins on the device (2-pin, 3-pin, or 4-pin devices).
   b. Place a plastic shunting cap over the top of the device well.
   c. The device is now properly shunted.
3. After shunting the device, carefully unscrew the device from the bottle.
a. Hold the device by the device well (the portion with the cap on it), keeping the small metal explosive assembly away from yourself or others.
4. Immediately wrap the entire device in anti-static foam.
5. Place entire device (wrapped in anti-static foam) in an anti-static bag.
6. Place shunted, wrapped, and bagged device into a fiberboard tube.
7. Place the tube into a fiberboard box with a 1.4B DOT Placard.
   a. No more than 12 devices can be stored in one box at one time.
8. Store box in a secure area until ready for disposal.
   a. Store away from low level electrical current, impact, static, heat, sparks, shock, or other RF energy.
9. Contact a licensed disposal facility, such as DD&C L.L.C out of Hastings, NE for pickup and disposal.

Storage/Disposal:

All Fenwal devices can be stored in the same box (2-pin, 3-pin, 4-pin) as long as the total number of devices in that box does not exceed 12. Do not store Fenwal devices in the same box with any other products.

Dispose of in accordance with all applicable local, state, and federal regulations.

You may contact your local Fire Department for information on disposal facilities, or you may directly contact a disposal facility such as:

DD&C L.L.C.
Shane D. Mullen – Managing Partner
1233 N. Minnesota
Hastings, NE 68901
Phone: (402) 460-5951
Fax: (402) 463-6057
Cell: (402) 831-0009
smullen@dd-c.co
www.dd-c.co

Procedure Details:

*Note on Fenwal Electric Initiators:* Fenwal Initiators are subject to federal ATF (Alcohol, Tobacco, and Firearms) licensing regulations, and may be subject to local and state regulations, depending on geographic location. Only properly trained and licensed individuals should handle these devices.

1. First and foremost, determine whether or not an initiator is even installed on the bottle. If there is an initiator installed, consult the remainder of this procedure for safe removal.
If there is no initiator installed, the initiator housing should look like these (nothing in the tube).

If an initiator is installed, you should see several pins, like those above. Fenwal initiators come in 2-pin, 3-pin, and 4-pin varieties.

2. Prior to removing the initiator from the Fenwal system bottle, the device must be properly shunted according to the following procedure to prevent accidental discharge:
   a. Place a piece of aluminum foil between the pins in the device well.
      i. The foil should make contact with all of the pins on the device (2-pin, 3-pin, or 4-pin devices).
b. Place a plastic shunting cap over the top of the device well.

c. The device is now properly shunted.

3. After shunting the device, carefully unscrew the device from the bottle.
It may be necessary to use a second wrench or pair of channel locks to hold the back nut – you only want to remove the cap holding the initiator in the cylinder

a. Hold the device by the device well (the portion with the cap on it), keeping the small metal explosive assembly away from yourself or others.

4. Immediately wrap the entire device in anti-static foam.

5. Place entire device (wrapped in anti-static foam) in an anti-static bag.
6. Place shunted, wrapped, and bagged device into a fiberboard tube.

7. Place the tube into a fiberboard box with a 1.4B DOT Placard.
   a. No more than 12 devices can be stored in one box at one time.

8. Store box in a secure area until ready for disposal.
a. Store away from low level electrical current, impact, static, heat, sparks, shock, or other RF energy.

9. Contact a licensed disposal facility, such as DD&C L.L.C out of Hastings, NE for pickup and disposal.

Additional Resources:

- Fenwal Website:
  - www.fenwalfire.com
- Fenwal P/N 31-19932-004 Electric Initiator
  - Spec Sheet:
  - Safety Data Sheet:
- Fenwal P/N 93-002009-004 Electric Initiator
  - Spec Sheet:
  - Safety Data Sheet:
- Fenwal P/N 93-191001-001 Electric Initiator
  - Spec Sheet:
  - Safety Data Sheet:

The information contained in this document was provided to A-Gas RemTec by DD&C L.L.C, a licensed explosives disposal company that specializes in the handling and disposal of 1.4S and 1.4B explosive devices. This information is being provided by A-Gas RemTec as a courtesy to our customers and suppliers, and is strictly to be used for general guidance on the safe handling of the devices referenced herein. This information is not intended to be used as a legal reference on local, state, or federal explosives regulations. Please follow all applicable local, state, and federal regulations for the handling and storage of explosive devices. A-Gas RemTec is not responsible for any damages to persons or property through the use of these procedures.