

# Smoke Detector Disposal

## **Hazards**

The most common type of smoke detector contains a small amount (< 2 microcuries or < 0.000000572 grams) of Americium 241, a synthetic isotope which emits both alpha and gamma rays, shielded inside the detector. The ingredient is shielded by a metal chamber within the plastic casing of the detector, which poses little threat on your wall or ceiling. However, if the detector is broken open in a landfill or incinerator, it can present a health hazard. For this reason, all detectors, by law, must be labeled as to radioactive content. Detector companies must accept returned radioactive detectors for disposal as hazardous waste.

The alpha particles emitted from the detector penetrate the air no more than a few centimeters. The gamma radiation is a low intensity ray, and much of it is blocked by the casing of the detector. According to the Nuclear Regulatory Commission, the amount of radiation that escapes the detector is roughly 3,000 times less than normal background radiation exposure rates at 1 meter from the detector.

Background radiation rates consist of the radiation from everyday sources, such as the sun, rocks, soil, air, etc. The only possible health risk is if the Americium 241 is inhaled. So, make sure not to disturb, poke, or play with the ingredient in your ionization detector, and in no case should you ever crush a smoke detector.

## **Handling & Disposal**

Although it is legal to dispose of your ionization detector in the trash, we encourage you to return the product back to the manufacturer. Manufacturers are mandated by the Nuclear Regulatory law 10 CFR 32.27 to see that the radioactive waste is disposed of at a nuclear waste disposal facility.

When sending back a smoke detector, you SHOULD NOT take it apart. The entire smoke detector needs to be returned to the manufacturer or store. However, the batteries can and should be removed for proper disposal at a local recycling facility or household hazardous waste collection facility. If returning the smoke detector by mail, ship unit fully assembled in a sturdy box via a freight service such as UPS, DHL, or Federal Express. Never use the US Postal Service.

The box should have "*FOR DISPOSAL ONLY*" written on the outside and the the following UN291 1 statement should be listed on the waybill, "*This package conforms to the conditions and limitations specified in*

*49 CFR 173.422 and 173.424 for radioactive material, excepted package-instruments or articles - UN29 11*".

Lastly, many manufacturers require you to obtain a Return Merchandise Authorization (RMA) number from the respective customer service department prior to returning the detector.

*This information is intended to be a guide to answer commonly asked questions about smoke detector disposal and does not constitute official rule, regulation, or law.*

**SMOKE DETECTOR DISPOSAL**

<b>Manufacturer / Distributor</b>	<b>Phone Number</b>	<b>Mailing Address / Web site</b>	<b>Notes</b>
American Sensor / Dicon Global, Inc. / First Alert / BRK Electronics	800-387-4219	Dicon Global, Inc. 88B East Beaver Creek Road, Unit 6, Richmond Hill Ontario, Canada L4B 4W2  <a href="http://www.nadi.com/asiPage.htm">http://www.nadi.com/asiPage.htm</a>	Also accepts North American, Garrison, and TEN-TEK brand detectors
Code One / Firex / Maple Chase Products	800-951-5526	Attention: RMA Firex 28-C Leigh Fischer Boulevard El Paso, TX 79906  <a href="http://www.firexsafety.com">www.firexsafety.com</a>	Defective detectors only. No RMA number required.
Edwards System Technology (EST)	800-655-4497	GE Security / EST 5 North Main Street Pittsfield, ME 04967  <a href="http://www.gesecurity.com">www.gesecurity.com</a>	Call for instructions
Family Safety Product	800-748-0298	Family Safety Products 2879 Remico Street Grandville, MI 49418  <a href="http://www.familysafetyproductsinc.com">www.familysafetyproductsinc.com</a>	Must obtain RMA number prior to returning. (No longer produces smoke detectors)
First Alert	800-392-1395	First Alert Customer Service Dept. 3920 Enterprise Court Aurora, IL 60504  <a href="http://www.firstalert.com">www.firstalert.com</a>	Accepted if still under warranty (No longer produces smoke detectors)
Gentex Corporation	800-436-8391	Return Department 600 North Centennial Street Zeeland, MI 49464  <a href="http://www.gentex.com">www.gentex.com</a>	Accepted if still under warranty (No longer produces smoke detectors)
Honeywell	800-328-5111	Honeywell International, Inc. 101 Columbia Road Morristown, NJ 07962  <a href="http://www.honeywell.com">www.honeywell.com</a>	Call for instructions. (No longer produces smoke detectors)
Interactive Technologies	888-437-3287	GE Security 8985 Town Center Parkway Bradenton, FL 34202-5129  <a href="http://www.gesecurity.com">www.gesecurity.com</a>	Call for instructions
MasterGuard	972-393-1700	MasterGuard 801 Hammond Street, Suite 200 Coppell, TX 75019  <a href="http://www.masterguard.com">www.masterguard.com</a>	Recyclable device. MasterGuard smoke detectors are photoelectric devices and do not contain radioactive material.
Nighthawk Systems	800-880-6788	Kidde 1016 Corporate Park Drive Mebane, NC 27302  <a href="http://www.kidde.com">www.kidde.com</a>	Accepted if still under warranty (No longer produces smoke detectors)
Radio Shack	817-415-3011	<a href="http://www.radioshack.co">www.radioshack.co</a>	Bring to local store with receipt
Sears	805-446-3200	<a href="http://www.sears.com">www.sears.com</a>	Local stores will take back any brand Sears sells without receipt
Sentrol / ESL / Interlogi	1-888-437-3287	GE Infrastructure, Security 12345 SW Leveton Drive Tualatin, OR	Must obtain a Return Merchandise Authorization (RMA) Number
System Sensor	800-736-7672	System Sensor Customer Service Dept. 3825 Ohio Avenue St. Charles, IL 60174  <a href="http://www.systemsensor.com">www.systemsensor.com</a>	Defective Sytem Sensor units only. \$3 per unit disposal charge
Walter Kidde / Lifesaver / Kidde Fymetics	800-880-6788	Kidde 1016 Corporate Park Drive Mebane, NC 27302  <a href="http://www.kidde.com">www.kidde.com</a>	Call for instructions. (No longer produces smoke detectors)