

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 UN2911 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 - UN2911*".

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.

Walter Kidde / Lifesaver / Kidde Fymetics	800-880-6788	Kidde 1016 Corporate Park Drive Mebane, NC 27302 www.kidde.com	Call for instructions. (No longer produces smoke detectors)
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