



Ohio Administrative Code

Rule 3701:1-40-09 Certain items containing radioactive material.

Effective: June 25, 2015

(A) Except for persons who apply radioactive material to, or persons who incorporate radioactive material into, the following products, or persons who initially transfer for sale or distribution the following products containing radioactive material, any person is exempt from the requirements for a license set forth in this chapter and Chapters 3701:1-38, 3701:1-46, 3701:1-48, 3701:1-49, 3701:1-52, and 3701:1-58 of the Administrative Code to the extent that such person receives, possesses, uses, transfers, owns, or acquires the following products:

(1) Timepieces or hands or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified levels of radiation:

(a) Nine hundred twenty-five megabecquerels (twenty-five millicuries) of tritium per timepiece,

(b) One hundred eighty-five megabecquerels (five millicuries) of tritium per hand,

(c) Five hundred fifty-five megabecquerels (fifteen millicuries) of tritium per dial (bezels when used shall be considered as part of the dial),

(d) 3.7 megabecquerels (one hundred microcuries) of promethium-147 per watch or 7.4 megabecquerels (two hundred microcuries) of promethium-147 per any other timepiece,

(e) Seven hundred forty kilobecquerels (twenty microcuries) of promethium-147 per watch hand or 1.48 megabecquerels (forty microcuries) of promethium-147 per other timepiece hand,

(f) 2.22 megabecquerels (sixty microcuries) of promethium-147 per watch dial or 4.44 megabecquerels (one hundred twenty microcuries) of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial), and

(g) The levels of radiation from hands and dials containing promethium-147 will not exceed, when



measured through fifty milligrams per square centimeter of absorber:

- (i) For wrist watches, one microgray (0.1 millirad) per hour at ten centimeters from any surface,
 - (ii) For pocket watches, one microgray (0.1 millirad) per hour at one centimeter from any surface,
and
 - (iii) For any other timepiece, two microgray (0.2 millirad) per hour at ten centimeters from any
surface.
- (h) Thirty-seven kilobecquerels (one microcurie) of radium-226 per timepiece in intact timepieces
manufactured prior to November 30, 2007.

(2)

- (a) Static elimination devices which contain, as a sealed source or sources, radioactive material
consisting of a total of not more than 18.5 megabecquerels (five hundred microcuries) of polonium-
210 per device.
- (b) Ion generating tubes designed for ionization of air that contain, as a sealed source or sources,
byproduct material consisting of a total of not more than 18.5 megabecquerels (five hundred
microcuries) of polonium-210 per device or of a total of not more than 1.85 gigabecquerels (fifty
millicuries) of hydrogen-3 (tritium) per device.
- (c) Such devices authorized before October 23, 2012 for use under the general license then provided
in rule 3701:1-46-04 of the Administrative Code and equivalent regulations of "Agreement States"
and manufactured, tested, and labeled by the manufacturer in accordance with the specifications
contained in a specific license issued by the director.

(3) Balances of precision containing not more than thirty-seven megabecquerels (one millicurie) of
tritium per balance or not more than 18.5 megabecquerels (0.5 millicurie) of tritium per balance part
manufactured before December 17, 2007.



(4) Marine compasses containing not more than 27.75 gigabecquerels (seven hundred fifty millicuries) of tritium gas and other marine navigational instruments containing not more than 9.25 gigabecquerels (two hundred fifty millicuries) of tritium gas manufactured before December 17, 2007.

(5) Ionization chamber smoke detectors containing not more than thirty-seven kilobecquerels (one microcurie) of americium-241 per detector in the form of a foil and designed to protect life and property from fires.

(6) Electron tubes: provided, that each tube does not contain more than one of the following specified quantities of byproduct material:

(a) 5.55 gigabecquerels (one hundred fifty millicuries) of tritium per microwave receiver protector tube or three hundred seventy megabecquerels (ten millicuries) of tritium per any other electron tube;

(b) Thirty-seven kilobecquerels (one microcurie) of cobalt-60;

(c) One hundred eighty-five kilobecquerels (five microcuries) of nickel-63;

(d) 1.11 megabecquerels (thirty microcuries) of krypton-85;

(e) One hundred eighty-five kilobecquerels (five microcuries) of cesium-137; or

(f) 1.11 megabecquerels (thirty microcuries) of promethium-147;

And provided further, that the levels of radiation from each electron tube containing radioactive material do not exceed ten microgray (one millirad) per hour at one centimeter from any surface when measured through seven milligrams per square centimeter of absorber. For purposes of this paragraph, electron tubes include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pickup tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

(7) Ionizing radiation measuring instruments containing, for purposes of internal calibration or



standardization, one or more sources of radioactive material, provided that:

(a) Each source contains no more than one exempt quantity as set forth in the appendix to rule 3701:1-40-11 of the Administrative Code; and

(b) Each instrument contains no more than ten exempt quantities. For the purposes of this paragraph, an instrument's source may contain either one type or different types of radionuclides, and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in the appendix to rule 3701:1-40-11 of the Administrative Code, provided that the sum of such fractions shall not exceed unity.

(c) For purposes of this paragraph, 1.85 kilobecquerels (0.05 microcurie) of americium-241 is considered an exempt quantity under the appendix to rule 3701:1-40-11 of the Administrative Code.

(B) Any person who desires to apply radioactive material to, or to incorporate radioactive material into, the products exempted in paragraph (A) of this rule, or who desires to initially transfer for sale or distribution such products containing radioactive material, shall apply for a specific license issued by the United States nuclear regulatory commission.