

The Swedish Radiation Protection Institute's Regulations on Smoke Detectors containing Radioactive Sources;

issued on August 22, 1994.

On the basis of § 2, second sub-clause, paragraph 3 and §§ 7-9 of the Radiation Protection Ordinance, the Swedish Radiation Protection Institute has issued regulations as follow.

§ 1 These regulations apply to smoke detectors that contain radioactive sources. The regulations are not applicable to smoke detectors for domestic use. For these the Swedish Radiation Protection Institute's regulations (SSI FS 1992:4) on smoke detectors for domestic use containing radioactive sources apply.

Definitions

§ 2 In these regulations, the following concepts are used with the meanings specified here.

Smoke detector: A device that contains a radioactive source and intended to, at the first trace of fire give a signal to an automatic fire alarm or other fire defence or limiting device,

sealed source: a radioactive substance, firmly bound to a non radioactive solid or sealed within a capsule made of a non radioactive material strong enough to prevent dispersing of the radioactive material at normal use,

accredited test-house: a laboratory having a formal approval of its competence to perform specified tests or calibrations,

notified body: an organisation for tests or certifications within the CE-system having a formally recognised competence according to a certain directive.

Exception from the radiation protection ordinance

Wholesale trade, service etc.

§ 3 The exception from the requirements in section 2, first sub-clause, paragraph 5 in the Radiation Protection Ordinance (1988:293), is hereby deleted with respect to manufacturing, import or wholesale trading. Thus a licence is needed for those practices.

A licence is as well needed for performing service of smoke detectors.

Others

§ 4 For other dealing with smoke detectors, the requirements on the need of a licence according to § 20, paragraph 1 in the Radiation Protection Act (1988:220) do not apply. Such dealing may be possession, use or transport of smoke detectors.

Test and approval

§ 5 Smoke detectors for sale, transfer or installation shall be approved after type testing and meet the requirements in sections 6-12.

Approval after testing is made by the Swedish Radiation Protection Institute.

§ 6 The type test shall be performed at an accredited test-house or a notified body, or, if those bodies are not established, by the Swedish Radiation Protection Institute.

Requirements

The radioactive source

§ 7 The radioactive source shall be designed according to the Swedish Standard (SS-ISO 1677) on sealed sources.

§ 8 The summed up activity in a smoke detector must not exceed 200 kilobecquerels Am-241.

For smoke detectors that contain other nuclides than Am-241, the Swedish Radiation Protection Institute decides on the maximum activity in each single case.

§ 9 The radioactive source shall be as firmly attached in the smoke detector as it could be expected to ain in the smoke detector after a fire. A smoke detector shall be able to install in a way that it can not easily be removed by unauthorised persons.

§ 10 The equivalent dose rate, at 0.1 metres distance from the surface of the smoke detector, must not exceed 1 microsievert per hour.

Marking etc.

§ 11 A smoke detector shall be provided with a permanent and clearly readable marking that comprises

1. the text "Innehåller radioaktivt ämne. Får demonteras endast av behörig. Kasserad detektor sänds till ..." * supplemented with the name of the company (importer or Swedish manufacturer) that takes care of the smoke detector,

2. type designation,

3. information of the activity of the source and the nuclide and

4. the warning symbol for ionising radiation.

§ 12 When a smoke detector is transferred, information that it contains a radioactive source shall be provided.

* "Contains a radioactive source. May only be dismantled by an authorised person. Smoke detectors that will not be used anymore shall be sent to ..."

Storage

§ 13 Smoke detectors that are not installed shall be recorded in a journal and be stored under lock in a way that is reasonably safe in case of fire. The place where they are kept shall be marked with a label which contains the warning symbol for ionising radiation, a text telling that radioactive sources are stored and a reference to the contact person.

Scrapped smoke detectors

§ 14 Smoke detectors that will not be used anymore shall be taken care of as radioactive waste in accordance to the section 13 in the Radiation Protection Act (1988:220).

Exceptions

§ 15 If there are special grounds, the Swedish Radiation Protection Institute may grant exceptions from these regulations.

These regulations enter into force on January 1st 1995 when the Swedish Radiation Protection Institute's regulations (SSI FS 1983:1) on smoke detectors containing radioactive sources and the regulations (SSI FS 1977:1) on the applicability of the Radiation Protection Ordinance (1958:625) shall cease to apply.

Provisional regulations

Smoke detectors that have been approved by the Swedish Radiation Protection Institute before the date when these regulations enter into force may further be sold, transferred, purchased, possessed or used.

On behalf of the Swedish Radiation Protection Institute

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