

Amendments up to SSI FS 2003:3 are inserted.

**The Swedish Radiation Protection Authority's Regulations on
Smoke Detectors for Domestic Use containing Radioactive Sources;**

issued on November 2nd 1992.

On the basis of 2, 3, 7-8 §§ and 9 § 4, of the Radiation Protection Ordinance (1988:293), and 2 § second sub-clause of the Ordinance in the earlier wording of the Section the Swedish Radiation Protection Authority has issued the following regulations.

Applicability

1 § These regulations apply to smoke detectors for domestic use that contain radioactive sources.

Definitions

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

Smoke detector: a device designed to detect the first trace of a fire and then give an alarm, containing a radioactive source, electric power supply, alarm and electronics,

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.

Exemption from the requirement on licence for trade and certain use

3 § For retail trade and consumer's use no licence according to the Radiation Protection Act (1988:220) is required, if the smoke detector contains Americium-241 with activity not more than 40 kilobecquerels. The same goes for transports and consumer's transfer of smoke detectors.

4 § Smoke detectors for sale or transfer shall be approved after type testing and meet the requirements in sections 8-13.

5 § *The Section is withdrawn through SSI FS 2003:3.*

Testing

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

7 § When a smoke detector is delivered for type testing it shall be provided with a certificate that shows that it meets the requirements given in the Swedish Consumer Agency's guidelines (KOV FS 1978:3) on smoke detectors for domestic use.

Requirements

The radioactive source

8 § The radioactive source shall be designed according to the Swedish Standard SS-ISO 2919 (edition 2, 1999) on sealed sources or in a way that affords corresponding safety.

9 § The summed up activity in a smoke detector must not exceed 40 kilobecquerels Am-241.

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

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

11 § A smoke detector shall be so designed that the radioactive source is not easy of access. It shall not be possible to easily open the ionisation chamber, by hand or by regular tools, so that the fingers may come into contact with the radioactive source. The radioactive source shall be as firmly attached in the smoke detector as it could be expected to remain in the smoke detector after a fire.

Marking and manual

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

1. the text "innehåller radioaktivt ämne" * and the warning symbol for ionising radiation,
2. information of the activity of the radioactive source and the nuclide and
3. type designation.

13 § At transfer, a smoke detector shall be provided with a manual in Swedish. The manual shall make clear the smoke detector contains a radioactive source.

* Contains a radioactive source

Storage

14 § Smoke detectors shall be stored under lock in a way that is reasonably safe in case of a fire and so that corrosion and mechanic impacts are prevented. This is also valid concerning the handling of discarded smoke detectors.

The place where the smoke detectors are stored shall be marked with a label containing the warning symbol for ionising radiation and a text telling that radioactive sources are stored. The label shall be yellow with black symbol and text.

The requirements in the first sub-clause do not apply regarding smoke detectors that are intended for sale or consumers handling of smoke detectors.

Handling and licences to take care of collected discarded smoke detectors

15 § Discarded smoke detectors may be transferred for taking care of without a licence according to the Radiation Protection Act.

16 § Anyone who professionally handles waste may collect smoke detectors as well as, transport, possess for a limited time and transfer them to a consignee with a licence for the final handling according to 17 §.

17 § To dismount smoke detectors in a way that implies that the radioactive sources become accessible a licence is needed.

Exemptions

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

These regulations enter into force 4 weeks after they have been published in the Regulatory Code of Statutes of the Swedish Radiation Protection Authority.** At that day the Swedish Radiation Protection Authority's regulations (SSI FS 1985:2) on smoke detectors for domestic use containing radioactive substance shall cease to apply.

On behalf of the Board of the Swedish Radiation Protection Authority

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** I.e. enter into force on March 15th, 1993

SSI FS 2003:3

These regulations enter into force on February 1st 2004.