

## The Swedish Radiation Protection Institute's Regulations on Sun Beds;

issued on September 28<sup>th</sup> 1998.

On the basis of § 7 of the Radiation Protection Ordinance (1988:293), the Swedish Radiation Protection Institute has issued regulations as follow.

§ 1 These regulations apply on sun beds.

### Definitions

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

*sun bed:* an electrotechnical device containing ultraviolet radiation source and intended for the irradiation of human beings using ultraviolet radiation (older term: "sun lamp"),

*cosmetic sun bed:* a sun bed used for irradiating human beings with ultraviolet radiation mainly for the purpose of tanning the skin,

*medical sun bed:* a sun bed used for exposing human beings to ultraviolet radiation in the aim of treating diseases,

*radiation source:* part of a sun bed where ultraviolet radiation is generated,

*ultraviolet radiation:* electromagnetic radiation with wavelengths within the range of 180-400 nanometers (nm),

*UV type:* classification of sun beds with respect to radiation properties which are defined in Swedish Standard SS EN 60 335-2-27, 1997<sup>1</sup>.

### Sale, transfer of ownership, use

§ 3 Sun beds which are offered for sale, transfer of ownership or use shall fulfil the radiation protection requirements stipulated in Swedish standard SS EN 60 335-2-27, Edition 4, 1997, i.e. the clauses in the standard provided in Annex 1.<sup>2</sup>

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<sup>1</sup> Identical to the European standard, CENELEC EN 60335-2-27, 1997.

<sup>2</sup> The standard is a European harmonised standard. A sun bed is acceptable, from the standpoint of radiation protection, even if it does not meet the requirements of the standard, but offers an equivalent level of radiation protection.

## **Licence**

§ 4 Unless the sun bed is a UV type 3 appliance, a licence from the Swedish Radiation Protection Institute, in accordance with the Radiation Protection Act (1988:220), is required for the possession and use of a sun bed, other than for private use in the home.

§ 5 In the case of dermatology clinics, skin specialist clinics, psoriasis centres, general licence is hereby granted, regardless of the category of the appliance, on the terms stipulated in 14 – 16 §§.

## **Use of UV type 3 cosmetic sun beds**

§ 6 Anyone who, without special licence from the Swedish Radiation Protection Institute, runs a practice where sun beds are provided for the irradiation of human beings shall ensure that the regulations stipulated in 7 – 12 §§ are followed.

§ 7 The sun bed shall be of the UV type 3 and fulfil the radiation protection requirements which apply to this category. In order to agree with the requirements for UV type 3, such a sun bed shall be equipped with a radiation source of the original type in accordance with the marking on the sun bed. If the radiation source is of the fluorescent tube type, the sun bed may, alternatively, be equipped with tube lamps which the Swedish Radiation Protection Institute has explained are compatible with UV type 3.

§ 8 Anyone who runs a practice where a sun bed is provided to the general public for use must notify the municipality's environmental and health administration or corresponding authority of the activity.

§ 9 The sun bed shall be located or shielded in such a way as to prevent human beings from being unintentionally irradiated.

§ 10 The electricity supply to a sun bed in premises where sun beds are made available to the public for use, shall be equipped with an extra timer which switches off the current to the sun bed within a maximum of 60 minutes.

It shall be possible to further limit the irradiation time, in accordance with the manufacturer's exposure schedule or corresponding instructions, by setting the sun bed's regular or built-in timer.

§ 11 Eye protectors which fulfil the specifications of SS EN 60 355-2-27, Edition 4, 1997, shall be available for each individual who uses a sun bed.

§ 12 Advice and information, in accordance with Section 3, Annex 2, shall be posted on or next to each sun bed. The information shall be of a size and positioned in such a way that it is clearly visible to and readable by the person who intends to use the sun bed.

§ 13 The Swedish Radiation Protection Institute can transfer supervision of compliance with 6 – 12 §§ to a municipality, if the municipality willingly undertakes this supervision. For such supervision, the municipality can charge a fee, which corresponds to the municipality's costs, to those conducting the practice.

**Use of medical sun beds**

§ 14 A registered doctor with specialist competence in dermatology shall be involved in the practice. The task of the doctor is to ensure that the irradiation is only conducted on the basis of medical indications and that radiation protection is adequate.

§ 15 Irradiation of individuals who are not treated may not exceed the values specified in the Swedish Radiation Protection Institute's general recommendations (SSI FS 1990:1) concerning hygienic limits for ultraviolet radiation.

§ 16 It shall be possible to carry out radiation measurements to determine ultraviolet radiation doses. Such measurements shall be conducted immediately before and after radiation sources are replaced and, in general, whenever considered necessary.

**Exceptions**

§ 17 If special grounds exist, the Swedish Radiation Protection Institute may grant exceptions from these regulations.

These regulations enter into force on January 1, 1999 when the Swedish Radiation Protection Institute's regulations (SSI FS 1991:4) concerning sun lamps shall cease to apply.

On behalf of the Board of the Swedish Radiation Protection Institute

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**Section of SS EN 60 335-2-27, edition 4, 1997, specified in 3 § and which concerns radiation protection**

Electrical household appliances and similar utility goods – Safety – Part 2: Special requirements regarding utility goods for treating the skin with ultraviolet and infrared radiation for private and similar uses.

Clause	Concerns
1	Scope and validity
1 Note 2 p. 3	National authorities can add to or issue special requirements concerning use
2, 101	Definition of ultraviolet radiation source
2.102-2.105	Definition of UV type 1-4 for sun beds
2.107	Definition of effective irradiance
3	General requirements
6.101	Classification <sup>3</sup> of sun beds into UV types 1-4. Sun beds must be one of the UV types 1-4
7	Marking on the equipment and information in the operating instructions (see also Annex 2 of these regulations)
10	Nominal power, voltage and current during testing
22.105	Protective covering over radiation sources
22.108	Timer
32.101	Maximum and minimum values for UV irradiance within the different categories – measurement conditions and measurement regulations <sup>4</sup>
31.102	Requirements concerning eye protectors
Figure 101	Action spectrum of the UV radiation (also tables)
Supplement/A11	Requirements concerning failsafe timers

<sup>3</sup> The standard describes the UV types in the following manner: UV type 1 and UV type 2 are cosmetic sun beds which are intended for professional use under the supervision of a person who is suitably trained. UV type 3 are cosmetic sun beds which can be used without any special training. UV type 4 are sun beds which are intended for use in accordance with a doctor's prescription.

<sup>4</sup> In order to classify a sun bed into UV types according to 32.101, the maximum values of the biologically weighted (according to Figure 101 of the standard) and integrated irradiance in the radiation field from the sun bed are determined. In the case of UV type 3, all values in the measurement points must be less than the category's irradiance limit, in the range of 250-320 mm as well as 320-400 mm.

## Marking and Information

This annex contains information concerning the marking of sun beds which has been provided in accordance with standard SS EN 60 335-2-27, Edition 4, 1997 as well as the advice and information which, according to 12 §, shall be available for anyone using a sun bed for other than private purposes.

### 1 Marking

A sun bed shall be marked in a permanent and easily visible manner with information concerning:

- 1 category (UV type 1, 2, 3 or 4)<sup>5</sup>,
- 2 reference type designation of the radiation sources,
- 3 the text “Warning – ultraviolet radiation can be harmful to the eyes and skin. Read the operating instructions. Use eye protectors. Certain medicines and cosmetic preparations may cause hypersensitivity.” In the case of sun beds intended for use in a solarium or suchlike, the text “read the operating instructions” may be replaced by the text “consult the staff”.

Furthermore, UV type 4 sun beds shall be marked with the text “Warning – only to be used in accordance with a doctor’s prescription”.

Furthermore, sun beds whose luminance exceeds 100,000 Cd/m<sup>2</sup> must be marked with the text “Warning – intensive light. Do not look directly at the radiation source.”

If the warnings are combined, the word “Warning” does not have to be repeated several times.

### 2 Information on the operating instructions

The SS EN 60 355-2-27 standard, Edition 4, 1997, specifies the minimum information which must be provided in the operating instructions<sup>6</sup>.

### 3 Information and protection advice for people using sun beds

The exposure schedules in the manufacturer’s operating instructions or corresponding instruction shall be available, shall be clearly posted or communicated to those using the sun bed.

On or next to the sun bed, there shall be a notice in A3 format, at the minimum, with the text and layout<sup>7</sup> which, in these regulations are specified under the heading “Important Information for Sun bed Users”. The notice shall be positioned so that it is clearly visible to anyone using the sun bed.

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<sup>5</sup> In the case of older material which is “S-märkt” (S-marked), the S marking may correspond to the UV type 3 category marking.

<sup>6</sup> An example of such information is the manufacturer’s instructions for the first exposure, the exposure schedule and the number of exposures which should not be exceeded per year.

<sup>7</sup> The text and layout refers to the Swedish issue.

# Important Information for Sun bed Users

Advice from the Swedish Radiation Protection Institute

*There are risks associated with using a sun bed. The ultraviolet radiation can cause damage to your skin and eyes, depending on the properties of the sun bed, how much tanning you do and how sensitive you are. Follow this advice if you wish to tan:*

- 1 Never tan so much that your skin becomes red afterwards. If you do not already have a tan, your first tanning session should be brief. Five minutes may be sufficient. Adapt each session to your own skin tolerance.**

Your skin turns brown in order to protect itself against cell damage. Redness is a sign of skin damage. Be very careful and pay close attention to your skin reaction. The UVA radiation from sun beds is stronger than that from the sun and penetrates more deeply into the skin, which causes wear, inelasticity and wrinkling.

There may be a connection between using sun beds for tanning and the risk of contracting the form of skin cancer known as malignant melanoma. The World Health Organisation (WHO) considers that tanning more than ten times a year leads to an increased risk. Limit the number of times you tan, indoors as well as outdoors.

- 2 Do not use a sun bed:**

- **if you are under 18 years of age**  
Children and youths have extra sensitive skin. Therefore, they run a greater risk of future skin damage than adults.
- **if you have skin that is sensitive to sunlight and your skin does not tan easily in the sun**  
Individuals with skin which turns red but not brown in sunlight run a greater risk than others of suffering from skin damage due to UV radiation.
- **if you have already tanned in the sun on the same day or if it has been less than two days since you last tanned**  
Your skin can burn (redness and a burning sensation) after too much tanning. Your skin needs time to recuperate to retain the protective mechanisms of the cells.

- **if you are under medication or if you have an infection**

Certain medicines can cause impaired skin tolerance to UV radiation. Ask your doctor or your pharmacists if you are unsure. The UV radiation also cause reduced immunity and certain virus infections can become worse.

- **if you have or have had skin cancer or if it runs in your family**

You have a greater risk of contracting malignant melanoma if you have or have had skin cancer or if the disease runs in your family.

- 3 Do not use preparations which reinforce tanning. Remove all makeup**

Preparations which reinforce the skin's ability to tan by increasing sensitivity to ultraviolet radiation increase the risk of burning. Certain types of makeup can also have this effect.

- 4 Do not expect that your sun bed tan will protect you outdoors in strong sunlight or that it will relieve mild skin irritations.**

The brown colour that you obtain from tanning in a sun bed does not protect your skin in the same way as the colour and thicker skin that you obtain from sun tanning outdoors. Tanning in a sun bed will not provide you with complete protection before a holiday abroad.

Do not treat skin diseases yourself by tanning in a sun bed. Consult a doctor. Special sun beds are used for medical purposes.

- 5 Use eye protectors while tanning in the sun bed**

UV radiation can result in a painful, acute inflammation of the cornea. You cannot protect your eyes by simply closing them.

- 6 Go to a doctor if your birthmarks start to itch, bleed, change or grow.**

There is a greater chance of curing malignant melanoma if the disease is detected at an early stage.

