

# INTERNATIONAL STANDARD

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## **Protective devices against diagnostic medical X-radiation –**

### **Part 3: Protective clothing and protective devices for gonads**

*Dispositifs de protection radiologique  
contre les rayonnements X pour diagnostic médical –*

*Partie 3:  
Vêtements et dispositifs de protection radiologique  
des gonades*

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## PROTECTIVE DEVICES AGAINST DIAGNOSTIC MEDICAL X-RADIATION –

### Part 3: Protective clothing and protective devices for gonads

#### FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61331-3 has been prepared by subcommittee 62B: Diagnostic imaging equipment, of IEC technical committee 62: Electrical equipment in medical practice.

The text of this part is based on the following documents:

FDIS	Report on voting
62B/347/FDIS	62B/357/RVD

Full information on the voting for the approval of this part can be found in the report on voting indicated in the above table.

Annex A forms an integral part of this standard.

Annex B is for information only.

A bilingual version of this standard may be issued at a later date.

## PROTECTIVE DEVICES AGAINST DIAGNOSTIC MEDICAL X-RADIATION –

### Part 3: Protective clothing and protective devices for gonads

## 1 Scope and object

### 1.1 Scope

This part of International Standard IEC 61331 applies to PROTECTIVE DEVICES such as PROTECTIVE CLOTHING for the protection of persons against X-RADIATION up to 150 kV, during RADIOLOGICAL examinations and interventional procedures.

NOTE – PROTECTIVE DEVICES are not intended by themselves to provide complete protection of persons, but are used to reduce the dose to persons where other methods of protection against X-RADIATION are insufficient or not applicable.

### 1.2 Object

This standard deals with:

- general requirements on the ACCOMPANYING DOCUMENTS, and on design and materials used;
- standard sizes, particular design features, minimum ATTENUATION properties of materials, marking and standardized forms of statements of compliance with this standard.

It covers PROTECTIVE CLOTHING mainly for the protection of the OPERATOR, such as:

- PROTECTIVE APRONS;
- PROTECTIVE GLOVES;
- PROTECTIVE MITTENS;

and PROTECTIVE DEVICES for gonads for the protection of the PATIENT, such as:

- PROTECTIVE GONAD APRONS;
- SCROTUM SHIELDS;
- OVARY SHIELDS;
- SHADOW SHIELDS.

The latter group of PROTECTIVE DEVICES is intended to be used during RADIOLOGICAL examinations to minimize the effects of IRRADIATION on the reproductive organs particularly with regard to genetic damage.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61331. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61331 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60788:1984, *Medical radiology – Terminology*

IEC 61331-1:1994, *Protective devices against diagnostic medical X-radiation – Part 1: Determination of attenuation properties of materials*