

Nuclear criticality safety - Nuclear criticality safety training for operations (ISO 23133:2021)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 23133:2022 sisaldab Euroopa standardi EN ISO 23133:2022 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 23133:2022 consists of the English text of the European standard EN ISO 23133:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.12.2022.	Date of Availability of the European standard is 21.12.2022.
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English Version

Nuclear criticality safety - Nuclear criticality safety
training for operations (ISO 23133:2021)

Sûreté-criticité - Formation à la sûreté-criticité dans le
cadre de l'exploitation (ISO 23133:2021)

Kritikalitätssicherheit - Kritikalitätssicherheitstraining
für Betriebe (ISO 23133:2021)

This European Standard was approved by CEN on 18 December 2022.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of ISO 23133:2021 has been prepared by Technical Committee ISO/TC 85 "Nuclear energy, nuclear technologies, and radiological protection" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 23133:2022 by Technical Committee CEN/TC 430 "Nuclear energy, nuclear technologies, and radiological protection" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by June 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 23133:2021 has been approved by CEN as EN ISO 23133:2022 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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ISO 23133 was prepared by Technical Committee ISO/TC 85, *Nuclear energy, nuclear technologies, and radiological protection*, Subcommittee SC 5, *Nuclear installations, processes and technologies*.

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Introduction

Experience of criticality accidents and evidence of operations history worldwide has indicated that human errors on different levels (management, operations staff, and/or operations supervisors), through lack of understanding or ignorance of nuclear criticality safety, have contributed to accidents.

In order to maintain nuclear criticality safety for facilities handling and processing fissile material it is necessary to ensure the operations staff, operations supervisors, and management are suitably trained in nuclear criticality safety. This document was developed in response to demand for a definition of the minimum nuclear criticality safety training requirements for operations staff, operations supervisors, and management.

This training is distinct from that of the training necessary for nuclear criticality safety staff in that it is tailored to suit the needs of maintaining nuclear criticality safety for operations. This document sets out standards for achieving and maintaining an adequate level of understanding and knowledge in order to operate nuclear facilities safely with respect to nuclear criticality safety.

This document covers high-level training for maintaining nuclear criticality safety. This includes preparedness for and response to a potential criticality accident. ISO 11320 contains more specific training provisions on emergency preparedness and response. This document supports integrating such provisions, when relevant, within the training program for operations staff, operations supervisors, and management.

Nuclear criticality safety — Nuclear criticality safety training for operations

1 Scope

This document specifies minimum nuclear criticality safety training requirements for operations staff, operations supervisors, and management.

This document is applicable to areas, processes or facilities containing quantities of fissile material for which nuclear criticality safety assessment is required as defined in ISO 1709.

This document is not applicable to the transport of fissile materials outside the boundaries of nuclear establishments.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

operations staff

workers who, in the act of carrying out activities as part of a facility or process, have duties for maintaining nuclear criticality safety

Note 1 to entry: These include staff and (sub)contractors performing activities in accordance with written procedures as part of production, processing and handling of fissile material. They may also include workers such as maintenance workers, and health physics monitors if they could have an effect on nuclear criticality safety either through action or inaction as part of their duties. They do not include support staff, whose actions would not be expected to affect fissile material processes.

3.2

operations supervisors

individuals who direct or supervise *operations staff* (3.1) in the production, processing or handling of fissile material, and who accept responsibility for the safety of operations under his/her control

3.3

management

individuals with overall responsibility for the nuclear criticality safety of operations for a site, process or facility