
**Ionizing-radiation warning —
Supplementary symbol**

*Avertissement pour rayonnements ionisants — Symbole
supplémentaire*



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Foreword

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ISO 21482 was prepared by Technical Committee ISO/TC 85, *Nuclear energy*, Subcommittee SC 2, *Radiation protection*.

Introduction

The basic ionizing-radiation symbol, “the trefoil” [ISO 361, ISO 7010:2003, Table 1 (Reference number W003)], is used internationally to indicate the presence of radiation. There is a history of people, in particular those persons with insufficient technical education or background, receiving serious injuries or fatalities from handling large sealed radioactive sources and not correctly understanding the meaning of the basic ionizing radiation symbol on the source. The ability to interpret and understand the symbol is of crucial importance for all people.

With these problems in mind, the competent UN authority, the International Atomic Energy Agency (IAEA) with direction from the international community saw a necessity to develop a new symbol that is capable of fulfilling all the requirements placed on a warning symbol.

For that purpose, the IAEA designed a number of symbols with different colours and shapes and evaluated them in a number of preliminary tests. A series of assessments and comparisons were completed among people with insufficient technical education or background, children and among different cultures in 11 different countries. The result is put forth in this International Standard.

This symbol is intended to supplement the basic ionizing radiation symbol.

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Ionizing-radiation warning — Supplementary symbol

1 Scope

This International Standard specifies the symbol to warn of the presence of a dangerous level of ionizing radiation from a high-level sealed radioactive source that can cause death or serious injury if handled carelessly. This symbol is not intended to replace the basic ionizing radiation symbol [ISO 361, ISO 7010:2003, Table 1 (Reference number W003)], but to supplement it by providing further information on the danger associated with the source and the necessity for untrained or uninformed members of the public to stay away from it.

This symbol is recommended for use with International Atomic Energy Agency (IAEA) Category 1, 2, and 3 sealed radioactive sources. These sources are defined by the IAEA as having the ability to cause death or serious injuries.

2 Shape, proportions and colour of the symbol

The supplementary ionizing radiation warning symbol (see Figures 1 and A.1) is diagrammed below.

The symbol shall have a red (pantone red No. 187) background with black figures and a white outline of the figures. The symbol is acceptable without colour if the use of colour is not feasible, such as in the case of engraving the symbol on the source. The symbol should not be made smaller than 3,0 cm to assure that it is clearly visible.



Figure 1 — Supplementary ionizing radiation warning symbol

See Figures A.2 to A.6 for the individual elements of which this symbol is composed.