

INTERNATIONAL
STANDARD

ISO
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**Plastics — Methods of exposure to
laboratory light sources —**

Part 2:
Xenon-arc sources

*Plastiques — Méthodes d'exposition à des sources lumineuses de
laboratoire —*

Partie 2: Sources à arc au xénon



Reference number
ISO 4892-2:1994(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4892-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

Together with the other parts of ISO 4892, it cancels and replaces ISO 4892:1981, of which it constitutes a technical revision.

ISO 4892 consists of the following parts, under the general title *Plastics — Methods of exposure to laboratory light sources*:

- Part 1: *General guidance*
- Part 2: *Xenon-arc sources*
- Part 3: *Fluorescent UV lamps*
- Part 4: *Open-flame carbon-arc lamps*

Annex A of this part of ISO 4892 is for information only.

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Plastics — Methods of exposure to laboratory light sources —

Part 2: Xenon-arc sources

1 Scope

This part of ISO 4892 specifies methods for exposing specimens to xenon-arc light sources. General guidance is given in ISO 4892-1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 4892. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 4892 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 4582:1980, *Plastics — Determination of changes in colour and variations in properties after exposure to daylight under glass, natural weathering or artificial light.*

ISO 4892-1:1994, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance.*

CIE Publication No. 20:1972, *Recommendations for the integrated irradiance and the spectral distribution of simulated solar radiation for testing purposes.*

CIE Publication No. 85:1989, *Technical Report — Solar spectral irradiance.*

3 Principle

3.1 A xenon arc, when fitted with suitable filters and properly maintained, produces radiation with a spectral energy distribution similar to that of terrestrial sunlight in the ultraviolet and visible regions of the spectrum.

3.2 Specimens of the samples to be tested are exposed to the light source under controlled environmental conditions.

3.3 The procedure may include measurement of the irradiance and radiant exposure at the surface of the specimen.

3.4 It is recommended that a similar material of known behaviour be exposed simultaneously with the experimental material as a reference.

3.5 Intercomparison of results obtained from specimens exposed in different apparatus should not be made unless reproducibility has been established among devices for the material to be tested.