

Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 4892-3:2016)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 4892-3:2016 sisaldab Euroopa standardi EN ISO 4892-3:2016 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 4892-3:2016 consists of the English text of the European standard EN ISO 4892-3:2016.
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English Version

Plastics - Methods of exposure to laboratory light sources -
Part 3: Fluorescent UV lamps (ISO 4892-3:2016)

Plastiques - Méthodes d'exposition à des sources
lumineuses de laboratoire - Partie 3: Lampes
fluorescentes UV (ISO 4892-3:2016)

Kunststoffe - Künstliches Bestrahlen oder Bewittern in
Geräten - Teil 3: UV-Leuchtstofflampen (ISO 4892-
3:2016)

This European Standard was approved by CEN on 23 January 2016.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN ISO 4892-3:2016) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.

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

This document supersedes EN ISO 4892-3:2013.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 4892-3:2016 has been approved by CEN as EN ISO 4892-3:2016 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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

This fourth edition cancels and replaces the third edition (ISO 4892-3:2013), of which it constitutes a minor revision with the following change:

— in [A.2.3](#), further information on lamp combination is added.

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 lamps*
- *Part 3: Fluorescent UV lamps*
- *Part 4: Open-flame carbon-arc lamps*

Plastics — Methods of exposure to laboratory light sources —

Part 3: Fluorescent UV lamps

1 Scope

This part of ISO 4892 specifies methods for exposing specimens to fluorescent UV radiation, heat and water in apparatus designed to simulate the weathering effects that occur when materials are exposed in actual end-use environments to global solar radiation, or to solar radiation through window glass.

The specimens are exposed to fluorescent UV lamps under controlled environmental conditions (temperature, humidity and/or water). Different types of fluorescent UV lamp can be used to meet all the requirements for testing different materials.

Specimen preparation and evaluation of the results are covered in other International Standards for specific materials.

General guidance is given in ISO 4892-1.

NOTE Fluorescent UV lamp exposures for paints, varnishes and other coatings are described in ISO 11507.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

3 Principle

3.1 Fluorescent UV lamps, when following the manufacturer's recommendations for lamp maintenance and/or rotation, may be used to simulate the spectral irradiance of global solar radiation in the short wavelength ultraviolet (UV) region of the spectrum.

3.2 Specimens are exposed to various levels of UV radiation, heat and moisture (see 3.4) under controlled environmental conditions.

3.3 The exposure conditions may be varied by selection of the following:

- a) type of fluorescent UV lamp;
- b) irradiance level;
- c) temperature during the UV exposure;
- d) type of wetting (see 3.4);