

**Plastics - Methods of exposure to laboratory light  
sources - Part 2: Xenon-arc lamps (ISO 4892-2:2013 +  
ISO 4892-2:2013/Amd 1:2021)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 4892-2:2013 +A1:2021 sisaldab Euroopa standardi EN ISO 4892-2:2013 ja selle muudatuse A1:2021 ja ingliskeelset teksti.	This Estonian standard EVS-EN ISO 4892-2:2013 +A1:2021 consists of the English text of the European standard EN ISO 4892-2:2013 and its amendment A1:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.  Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.03.2013, muudatus A1 18.08.2021.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.  Date of Availability of the European standard is 06.03.2013, for A1 18.08.2021.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega <b>A1</b> ja <b>A1</b> .  Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags <b>A1</b> and <b>A1</b> .  The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

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English Version

**Plastics - Methods of exposure to laboratory light sources - Part  
2: Xenon-arc lamps (ISO 4892-2:2013 + ISO 4892-2:2013/Amd  
1:2021)**

Plastiques - Méthodes d'exposition à des sources  
lumineuses de laboratoire - Partie 2: lampes à arc au xénon  
(ISO 4892-2:2013 + ISO 4892-2:2013/Amd 1:2021)

Kunststoffe - Künstliches Bestrahlen oder Bewittern in  
Geräten - Teil 2: Xenonbogenlampen (ISO 4892-2:2013 +  
ISO 4892-2:2013/Amd 1:2021)

This European Standard was approved by CEN on 9 February 2013. Amendment A1 was approved by CEN on 1 July 2021.

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

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

## Foreword

This document (EN ISO 4892-2:2013) 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 2013, and conflicting national standards shall be withdrawn at the latest by September 2013.

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 4892-2:2006.

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 4892-2:2013 has been approved by CEN as EN ISO 4892-2:2013 without any modification.

## **A1 Amendment A1 European foreword**

This document (EN ISO 4892-2:2013/A1:2021) 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 Amendment to the European Standard EN ISO 4892-2:2013 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2022, and conflicting national standards shall be withdrawn at the latest by February 2022.

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### **Endorsement notice**

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

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

This third edition cancels and replaces the second edition (ISO 4892-2:2006), which has been technically revised. It also cancels and replaces the Amendment ISO 4892-2:2006/Amd.1:2009.

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*

## **A1 Amendment A1 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](http://www.iso.org/directives)).

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 4892 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html). <sup>A1</sup>



# Plastics — Methods of exposure to laboratory light sources —

## Part 2:

## Xenon-arc lamps

### 1 Scope

This part of ISO 4892 specifies methods for exposing specimens to xenon-arc light in the presence of moisture to reproduce the weathering effects (temperature, humidity and/or wetting) that occur when materials are exposed in actual end-use environments to daylight or to daylight filtered through window glass.

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 Xenon-arc exposures of paints and varnishes are described in ISO 11341.

### 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*

ISO 9370, *Plastics — Instrumental determination of radiant exposure in weathering tests — General guidance and basic test method*

### 3 Principle

**3.1** A xenon arc, fitted with filters, is used to simulate the relative spectral irradiance of daylight in the ultraviolet (UV) and visible regions of the spectrum.

**3.2** Specimens are exposed to various levels of light, heat, relative humidity and water (see 3.4) under controlled environmental conditions.

**3.3** The exposure conditions are varied by selection of

- a) the light filter(s);
- b) the irradiance level;
- c) the temperature during exposure to light;