

**Paints and varnishes - Methods of exposure to  
laboratory light sources - Part 2: Xenon-arc lamps  
(ISO 16474-2:2013 + ISO 16474-2:2013/Amd 1:2022)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 16474-2:2013+A1:2022 sisaldab Euroopa standardi EN ISO 16474-2:2013 ja selle muudatuse A1:2022 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 16474-2:2013+A1:2022 consists of the English text of the European standard EN ISO 16474-2:2013 and its amendment A1:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.  Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.11.2013, muudatused A1 14.09.2022.	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 20.11.2013, for A1 14.09.2022.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega <b>A1</b> <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> <b>A1</b> .  The standard is available from the Estonian Centre for Standardisation and Accreditation.

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English Version

**Paints and varnishes - Methods of exposure to laboratory  
light sources - Part 2: Xenon-arc lamps (ISO 16474-2:2013  
+ ISO 16474-2:2013/Amd 1:2022)**

Peintures et vernis - Méthodes d'exposition à des  
sources lumineuses de laboratoire - Partie 2: Lampes à  
arc au xénon (ISO 16474-2:2013 + ISO 16474-  
2:2013/Amd 1:2022)

Beschichtungsstoffe - Künstliches Bestrahlen oder  
Bewittern in Geräten - Teil 2: Xenonbogenlampen (ISO  
16474-2:2013 + ISO 16474-2:2013/Amd 1:2022)

This European Standard was approved by CEN on 26 October 2013. Amendment A1 was approved by CEN on 5 August 2022.

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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 16474-2:2013) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

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 May 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

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### Endorsement notice

The text of ISO 16474-2:2013 has been approved by CEN as EN ISO 16474-2:2013 without any modification.

## **A1 Amendment A1 European foreword**

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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. [www.iso.org/directives](http://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 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

This first edition of ISO 16474-2, together with ISO 16474-1, cancels and replaces ISO 11341:2004 which has been technically revised.

ISO 16474 consists of the following parts, under the general title *Paints and varnishes — 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

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This document was prepared by Technical Committee TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 16474 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). **A1**

## Introduction

Coatings of paints, varnishes and similar materials (subsequently referred to simply as coatings) are exposed to laboratory light sources, in order to simulate in the laboratory the ageing processes which occur during natural weathering or during exposure tests under glass cover.

# Paints and varnishes — Methods of exposure to laboratory light sources —

## Part 2: Xenon-arc lamps

### 1 Scope

This part of ISO 16474 specifies methods for exposing specimens to xenon-arc light in the presence of moisture to reproduce the weathering effects that occur when materials are exposed in actual end-use environments to daylight or to daylight filtered through window glass.

The specimens are exposed to filtered xenon-arc light under controlled conditions (temperature, humidity and/or wetting). Various types of xenon-arc lamps and various filter combinations may 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 16474-1.

NOTE Xenon-arc exposures for plastics are described in ISO 4892-2.

### 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 4618, *Paints and varnishes — Terms and definitions*

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

ISO 16474-1, *Paints and varnishes — Methods of exposure to laboratory light sources — Part 1: General guidance*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 and the following apply.

#### 3.1 radiant exposure

*H*

amount of radiant energy to which a test panel has been exposed

Note 1 to entry: Radiant exposure is given by the equation  $H = \int E \cdot dt$ .