Paints and varnishes - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps ex approximation of the state o (ISO 16474-3:2013)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 16474-3:2013 sisaldab Euroopa standardi EN ISO 16474-3:2013 inglisekeelset teksti.	This Estonian standard EVS-EN ISO 16474-3:2013 consists of the English text of the European standard EN ISO 16474-3:2013.	
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.	
, and the second	Date of Availability of the European standard is 20.11.2013.	
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.	

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

ICS 87.040

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation: Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 16474-3

November 2013

ICS 87.040

Supersedes EN ISO 11341:2004

English Version

Paints and varnishes - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps (ISO 16474-3:2013)

Peintures et vernis - Méthodes d'exposition à des sources lumineuses de laboratoire - Partie 3: Lampes fluorescentes UV (ISO 16474-3:2013) Beschichtungsstoffe - Künstliches Bestrahlen oder Bewittern in Geräten - Teil 3: UV-Fluoreszenzlampen (ISO 16474-3:2013)

This European Standard was approved by CEN on 26 October 2013.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 16474-3:2013) 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.

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 11341:2004.

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 16474-3:2013 has been approved by CEN as EN ISO 16474-3:2013 without any modification.

Co	ntent	S S	Page
Fore	word		iv
Intr	oductio	n	v
1	Scop	e	1
2		native references	
3		ns and definitions	
4			
5	Principle Apparatus		
3	5.1 5.2 5.3	Laboratory light source Test chamber Radiometer	3 6
	5.4 5.5 5.6	Black-standard/black-panel thermometer Wetting and humidity Specimen holders	6 7
	5.7	Apparatus to assess changes in properties	
6	Test 6.1 6.2 6.3 6.4 6.5	Specimens (panels) General Preparation and coating Drying and conditioning Thickness of coating Number of test panels	
7	Test conditions		8
	7.1 7.2 7.3 7.4 7.5 7.6	Radiation Temperature Relative humidity of chamber air Condensation and spray cycles Complex cycles with dark periods Sets of exposure conditions	
8		edure and mounting of the test specimens	
O	8.1 8.2 8.3 8.4	General Exposure Measurement of radiant exposure Determination of changes in properties after exposure	10 10 11
9	Test	report	11
Ann	ex A (in	formative) Spectral distribution of radiation for typical fluorescent UV lamps	12
Bibl	iograpł	ny	

Introduction

ints, oorato, gnatural v 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 behind window glass.

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

Part 3:

Fluorescent UV lamps

1 Scope

This part of ISO 16474 specifies methods for exposing coatings to fluorescent UV lamps, heat and water in apparatus designed to reproduce the weathering effects that occur when materials are exposed in actual end-use environments to daylight, or to daylight through window glass.

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

 $Specimen\ preparation\ and\ evaluation\ of\ the\ results\ are\ covered\ in\ other\ ISO\ documents\ for\ specific\ materials.$

General guidance is given in ISO 16474-1.

NOTE Fluorescent UV lamp exposures for plastics are described in ISO 4892-3.

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 1514, Paints and varnishes — Standard panels for testing

ISO 2808, Paints and varnishes — Determination of film thickness

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

Н

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

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