Paints and varnishes - Coating materials and coating systems for exterior wood - Part 7: Assessment of knot staining resistance of wood coatings

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NATIONAL FOREWORD

See Eesti standard EVS-EN 927-7:2020 sisaldab Euroopa standardi EN 927-7:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 927-7:2020 consists of the English text of the European standard EN 927-7:2020.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 22.04.2020.	Date of Availability of the European standard is 22.04.2020.
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.

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Peintures et vernis - Produits de peinture et systèmes de peinture pour le bois en extérieur - Partie 7 : Évaluation de la résistance des revêtements pour bois aux taches provoquées par les nœuds

Beschichtungsstoffe - Beschichtungsstoffe und Beschichtungssysteme für Holz im Außenbereich - Teil 7: Beurteilung der Beständigkeit von Holzbeschichtungen gegen Astausfärbung

This European Standard was approved by CEN on 1 December 2019.

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European foreword

This document (EN 927-7:2020) has been prepared by 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of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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

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Introduction

The treatment of exterior wood surfaces has both aesthetic and protective functions. A vital purpose of a coating system is to protect against discoloration caused by wood extractives. Discoloration can be characterized as tannin staining or as knot staining.

This document provides a method for assessment of discoloration of coatings on wood caused by wood extractives in knots, i.e. it relates to knot staining only.

The method can be used for testing exterior and interior coatings for wood.

Previous investigations have shown that xenon arc exposure shows better correlation to natural weathering than the fluorescent UV test method.

1 Scope

This document specifies a test method for assessing the discoloration of coating systems on wood due to wood extractives from knots. The discoloration is measured by colourimetry and the result is stated as the colour difference between the coated surface on the knot and the coated surface beside the knot.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14298, *Sawn timber — Assessment of drying quality*

EN ISO/CIE 11664-4, *Colorimetry — Part 4: CIE 1976 L*a*b* colour space (ISO/CIE 11664-4)*

EN ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling (ISO 15528)*

EN ISO 16474-2:2013, *Paints and varnishes — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps (ISO 16474-2:2013)*

EN ISO 18314-1, *Analytical colorimetry — Part 1: Practical colour measurement (ISO 18314-1)*

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp/ui

3.1
tannin staining
appearance of discoloration on coated surfaces caused by wood extractives in the substrate

3.2
knot staining
appearance of discoloration on coated surfaces caused by wood extractives in knots

3.3
wood extractives
low-molecular wood components soluble in organic solvents or water

3.4
sound knot
knot that, at the relevant surface, is intergrown with the surrounding wood along more than 75 % of its circumference and is free of decay