Paints and varnishes - Coating materials and coating systems for exterior wood - Part 11: Assessment of air inclusions/microfoam in coating films

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NATIONAL FOREWORD

See Eesti standard EVS-EN 927-11:2020 sisaldab Euroopa standardi EN 927-11:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 927-11:2020 consists of the English text of the European standard EN 927-11:2020.
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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Paints and varnishes - Coating materials and coating systems for exterior wood - Part 11: Assessment of air inclusions/microfoam in coating films

Peintures et vernis - Produits de peinture et systèmes de peinture pour le bois en extérieur - Partie 11 : Évaluation des bulles et microbulles d'air dans les feuils de peinture

Beschichtungsstoffe - Beschichtungsstoffe und Beschichtungssysteme für Holz im Außenbereich - Teil 11: Beurteilung von Gaseinschlüssen/Mikroschaum in Beschichtungen

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

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 927-11:2020) 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of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.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.

This document supersedes CEN/TS 16358:2012.

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1 Scope

This document specifies a laboratory test method for assessing microfoam in coating films on wood components. Samples are taken from finished wood components that are produced in a production plant, by craftsmen or a laboratory.

The test method can be used for further evaluation together with the performance specification given in EN 927-2. The amount and size of microfoam depends upon the coating material, the substrate and the application process and conditions.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1
microfoam
spherical or ellipsoidal gas inclusions in a coating film visible with a light microscope at 80-fold magnification

Note 1 to entry: Microfoam can have an influence on durability, vapour and light transmission, colour, gloss, and tensile properties. Microfoam is held in place in the coating by e.g. high coating viscosity hindering the rising of micro-bubbles to the surface.

4 Principle

Microfoam in coating films is assessed by counting the quantity of air inclusions on the cross section of a coated sample along a distance of 10 mm using a microscope with minimum 80-fold magnification.

NOTE This method does not include measurement of size of air inclusions on cross sections of the coating film. This would not give evidence on the real size of air inclusions, because the measured diameter depends on the position where an air bubble is cut at random.

5 Procedure

Three test samples of coated wood are collected in a distance of minimum 200 mm from the corner joints or end grain. It is recommended to collect full cross sections of the wooden profiles, which enables the assessment of microfoam on all coated surfaces. Clean cross sections of the coating and wood substrate are produced using razor blades or a microtome over a length of minimum 15 mm on each position where assessment shall be carried out. Figure 1 shows a possible shape of samples for easy preparation of cross sections. Samples may be moistened with water to ease cutting of cross sections. On each sample, a distance of 10 mm is marked within the prepared cross section by razorblade or microtome cuts.