SLOVENSKI STANDARD
SIST EN 927-11:2020

01-junij-2020

Nadomešča:
SIST-TS CEN/TS 16358:2012

Barve in laki - Premazi in premazni sistemi za zaščito lesa za zunanjo uporabo - 11. del: Ocenjevanje obsežnosti zračnih vključkov/mikropenjenja v filmih premazov

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

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

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

Ta slovenski standard je istoveten z: **EN 927-11:2020**

ICS:

71.100.50	Kemikalije za zaščito lesa	Wood-protecting chemicals
87.040	Barve in laki	Paints and varnishes

SIST EN 927-11:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 927-11

April 2020

ICS 87.040

Supersedes CEN/TS 16358:2012

English Version

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

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Ref. No. EN 927-11:2020 E

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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of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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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

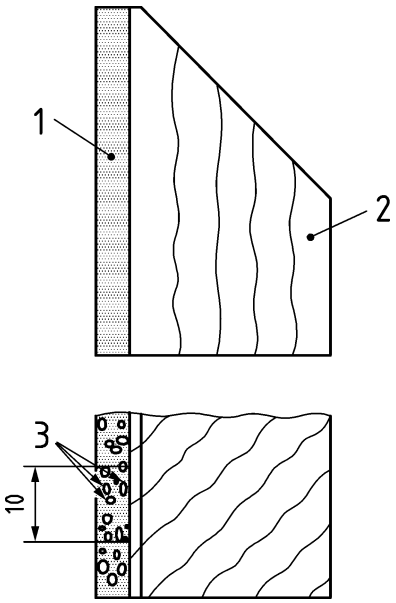
Microfoam in coating films is assessed by counting the quantity of air inclusions on the cross section of a coated sample along a distance of 10 mm using a microscope with minimum 80-fold magnification.

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.

Dimensions in millimetres



Key

1 coating
2 wood substrate
3 gas inclusions

Figure 1 —Preparation of samples for the assessment of microfoam

Assessment of microfoam is carried out by observing the cross section of the coating using a microscope with minimum 80-fold magnification. Within the marked distance of 10 mm, all air inclusions that were cut through during sample preparation are counted. When assessing transparent or semi-transparent coatings, a dye shall be used to distinguish between air inclusions which are cut through and those which are not. Dyeing can be done with a marker pen. After assessing microfoam on all three samples, a mean value of air inclusions per centimetre is calculated.

6 Test report

The test report shall contain at least the following information:

a) reference to this document;

b) name and address of the testing laboratory;

c) type of apparatus (microscope, cutting device) used;

d) magnification used;

e) identification number of the test report;

f) name and address of the organization or the person who ordered the test;

g) date and person responsible for the sampling;

h) date of receipt of the coating system tested;

i) test results;

j) authorization date of the test report.