

PD CEN/TS 16358:2012



BSI Standards Publication

**Paints and varnishes —
Coating materials and
coating systems for exterior
wood — Assessment of air
inclusions/microfoam in
coating films**

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee STI/28, Paint systems for non-metallic substrates.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Published by BSI Standards Limited 2012

ISBN 978 0 580 76732 6

ICS 87.040

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This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 July 2012.

Amendments issued since publication

Amd. No.	Date	Text affected
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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 16358

July 2012

ICS 87.040

English Version

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

Peintures et vernis - Produits de peintures et systèmes de
peintures pour le bois en extérieur - Evaluation des bulles
et microbulles d'air dans les feuillets de peinture

Beschichtungsstoffe - Beschichtungsstoffe und
Beschichtungssysteme für Holz im Außenbereich -
Beurteilung von Lufteinschlüssen/Mikroschaum in
Beschichtungsfilmern

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Foreword

This document (CEN/TS 16358:2012) has been prepared by Technical Committee CEN/TC 139 “Paints and varnishes”, the secretariat of which is held by DIN.

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1 Scope

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

2 Principle

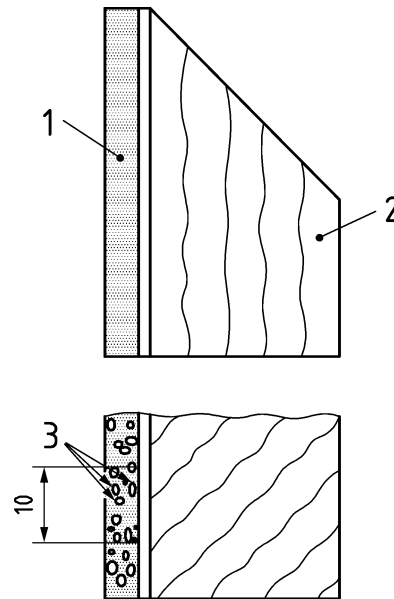
Microfoam in coating films is assessed by counting the quantity of air inclusions on the cross section of a coated sample along a distance of 10 mm using a microscope with min. 80 × magnification.

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.

3 Procedure

Three test samples of coated wood are collected in a distance of min. 200 mm from the corner joints or end grain. It is recommended to collect full cross sections of the wooden window profiles of the frame and casement 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 min. 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 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 air 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 min. $80\times$ 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.

4 Test report

The test report shall contain at least the following information:

- a) reference to this Technical Specification;
- b) name and address of the testing laboratory;
- c) type of apparatus used;
- d) identification number of the test report;
- e) name and address of the organisation or the person who ordered the test;
- f) date and person responsible for the sampling;
- g) date of receipt of the coating system tested;
- h) test results;
- i) authorisation date of the test report.

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