

ICS 87.040

English Version

**Paints and varnishes - Coating materials and coating systems  
for exterior wood - Assessment of film extensibility by  
indentation of a coating on a wooden substrate**

Peintures et vernis - Produits de peintures et systèmes de  
peintures pour bois en extérieur - Évaluation de  
l'extensibilité du feuillet par poinçonnement d'un revêtement  
sur un support en bois

Beschichtungsstoffe - Beschichtungsstoffe und  
Beschichtungssysteme für Holz im Außenbereich -  
Beurteilung der Verformbarkeit durch Eindrücken einer  
Beschichtung auf einem Holzsubstrat

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## Contents

Page

Foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 Principle .....	5
5 Apparatus .....	5
6 Procedure .....	7
6.1 Wood panels.....	7
6.2 Coating application.....	7
6.3 Assessment of film extensibility .....	7
7 Test report .....	7
Bibliography .....	9

## Foreword

This document (CEN/TS 16360:2012) has been prepared by Technical Committee CEN/TC 139 “Paints and varnishes”, the secretariat of which is held by DIN.

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## Introduction

A suitable extensibility of a coating film on wood in exterior use is of importance to follow dimensional changes of the wood and to resist some mechanical impacts without formation of cracks in the coating film. The simple method described in this document gives evidence on extensibility of a coating film on wood on an ordinal scale and provides first evidence on mechanical behaviour. A similar method exists in EN 13696:2008 for coated wood floorings in interior use but in the present document the description of a carefully selected substrate is added to enable testing of coating materials and coating systems for exterior wood. The method should preferably be used on coatings that have not been exposed to weathering but it may also be applied after ageing of the coating film or under different climatic conditions to gain additional experience.

## 1 Scope

This Technical Specification specifies a test method for assessing film extensibility by indentation of a coating on a defined and carefully selected wooden extensibility substrate for coatings on stable wood components in exterior use. The method is preferably be used on coatings that have not been exposed to weathering.

## 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.

EN 927-3:2012, *Paints and varnishes — Coating materials and coating systems for exterior wood — Part 3: Natural weathering test*

EN ISO 4618:2006, *Paints and varnishes — Terms and definitions (ISO 4618:2006)*

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

ISO 3131, *Wood — Determination of density for physical and mechanical tests*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 4618:2006 and the following apply.

### 3.1

#### **film extensibility**

ability of a dry film to follow without damage the deformations of the substrate to which it is applied

## 4 Principle

A metal plate with 12 cones with different heights is pressed into a coated wood surface and after removing the plate coating cracks in the areas indented by the cones are assessed.

## 5 Apparatus

**5.1 Cone plate**, metal plate with 12 cones with different heights (see Figure 1). The tips of cones are slightly rounded, bases of all cones lie on the level of the metal plate, measures of cones are listed in Table 1.