



BSI Standards Publication

**Paints and varnishes — Coating materials and coating systems for exterior wood — Resistance to blocking of paints and varnishes on wood**

**National foreword**

This Published Document is the UK implementation of CEN/TS 16499:2013.

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

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**CEN/TS 16499**

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English Version

**Paints and varnishes - Coating materials and coating systems  
 for exterior wood - Resistance to blocking of paints and  
 varnishes on wood**

Peintures et vernis - Produits de peinture et systèmes de  
 peinture pour le bois en extérieur - Résistance au blocage  
 des peintures et vernis sur bois

Beschichtungsstoffe - Beschichtungsstoffe und  
 Beschichtungssysteme für Holz im Außenbereich -  
 Bestimmung der Blockfestigkeit

This Technical Specification (CEN/TS) was approved by CEN on 12 February 2013 for provisional application.

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## Foreword

This document (CEN/TS 16499:2013) has been prepared by Technical Committee CEN/TC 139 "Paints and varnishes", the secretariat of which is held by DIN.

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

Remark about climatic conditions:

EN 23270, *Paints and varnishes and their raw materials — Temperatures and humidity for conditioning and testing* (ISO 3270) prescribe the use of standard conditions 23/50 [(23 ± 2) °C and (50 ± 5) % relative humidity]. Historically for wooden substrates there are a lot of mechanical properties which refer to the alternative standard conditions 20/65 [(20 ± 2) °C and (65 ± 5) % relative humidity] according to ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*. Therefore, the use of standard conditions 20/65 instead of standard conditions 23/50 could be arranged but should be noted.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This Technical Specification specifies a test method for determining, under standard conditions, whether a single-coat film or a multi-coat system of paints and varnishes on wood after a specified drying period is sufficiently dry to avoid damage when two painted surfaces or one painted surface and another surface are placed in contact under pressure and subsequently separated. The method is intended to simulate the conditions when painted articles come into contact with each other. In comparison to EN ISO 9117-2, the conditioning and parameters which influence the behaviour of wood coatings are more specific.

NOTE In some countries, the test is called a "block or blocking resistance" test.

## 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 927-1, *Paints and varnishes - Coating materials and coating systems for exterior wood - Part 1: Classification and selection*

EN 23270, *Paints and varnishes and their raw materials - Temperatures and humidities for conditioning and testing (ISO 3270)*

EN ISO 1513, *Paints and varnishes - Examination and preparation of test samples (ISO 1513)*

EN ISO 2808, *Paints and varnishes - Determination of film thickness (ISO 2808)*

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

## 3 Terms and definitions

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

**3.1 blocking**  
unwanted adhesion between two surfaces, at least one of which has been coated, when they are left in contact under load after a given drying period

[SOURCE: EN ISO 4618:2006; 3.29]

Note 1 to entry: Blocking does not apply to bonding of coated surfaces after insufficient drying.

Note 2 to entry: In practice, blocking can occur if coated wood panels are stacked on each other or on windows and doors if the panels are in direct contact with the faces. Blocking depends on temperature and load (pressure).

Note 3 to entry: The term blocking is also sometimes used to describe agglomerated caked powder.

Note 4 to entry: Unwanted adhesion can lead to damage upon separation.

**3.2 load**  
mass needed to achieve a suitable test pressure