



BSI Standards Publication

**Laminate floor coverings – Elements with a surface layer based on aminoplastic thermosetting resins  
– Specifications, requirements and test methods**

---

## National foreword

This British Standard is the UK implementation of EN 13329:2016+A1:2017. It supersedes BS EN 13329:2016, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee PRI/60, Resilient and Laminate Floor Coverings.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2018  
Published by BSI Standards Limited 2018

ISBN 978 0 580 96142 7

ICS 97.150

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2016.

### Amendments/corrigenda issued since publication

| Date         | Text affected                           |
|--------------|-----------------------------------------|
| 30 June 2018 | Implementation of CEN amendment A1:2017 |

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 13329:2016+A1**

October 2017

ICS 97.150

Supersedes EN 13329:2016

English Version

**Laminate floor coverings - Elements with a surface layer  
based on aminoplastic thermosetting resins -  
Specifications, requirements and test methods**

Revêtements de sol stratifiés - Éléments dont la surface  
est à base de résines aminoplastes thermodurcissables  
- Spécifications, exigences et méthodes d'essai

Laminatböden - Elemente mit einer Deckschicht auf  
Basis aminoplastischer, wärmehärtbarer Harze -  
Spezifikationen, Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 27 November 2015 and includes Amendment 1 approved by CEN on 1 July 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

|                                                                                                               |    |
|---------------------------------------------------------------------------------------------------------------|----|
| European foreword.....                                                                                        | 4  |
| 1 Scope .....                                                                                                 | 5  |
| 2 Normative references .....                                                                                  | 5  |
| 3 Terms and definitions .....                                                                                 | 6  |
| 4 Requirements .....                                                                                          | 7  |
| 4.1 General requirements .....                                                                                | 7  |
| 4.2 Classification requirements .....                                                                         | 8  |
| 4.3 Additional technical characteristics .....                                                                | 10 |
| 5 Marking and packaging.....                                                                                  | 10 |
| 5.1 Marking.....                                                                                              | 10 |
| 5.2 Packaging .....                                                                                           | 11 |
| 6 Test report.....                                                                                            | 11 |
| Annex A (normative) Determination of thickness, length, width, squareness, straightness<br>and flatness ..... | 12 |
| A.1 Sampling.....                                                                                             | 12 |
| A.2 Conditioning.....                                                                                         | 12 |
| A.3 Apparatus.....                                                                                            | 12 |
| A.4 Procedure.....                                                                                            | 14 |
| A.4.1 Determination of thickness (t) .....                                                                    | 14 |
| A.4.2 Determination of length (l).....                                                                        | 15 |
| A.4.3 Determination of width (w) .....                                                                        | 16 |
| A.4.4 Determination of dimensions of squared elements .....                                                   | 16 |
| A.4.5 Determination of squareness (q) .....                                                                   | 17 |
| A.4.6 Determination of straightness (s).....                                                                  | 17 |
| A.4.7 Determination of width flatness ( $f_w$ ).....                                                          | 18 |
| A.4.8 Determination of length flatness ( $f_l$ ).....                                                         | 18 |
| A.5 Calculation and expression of results.....                                                                | 19 |
| A.5.1 Thickness (t) .....                                                                                     | 19 |
| A.5.2 Length (l).....                                                                                         | 19 |
| A.5.3 Width (w) .....                                                                                         | 19 |
| A.5.4 Squareness (q) .....                                                                                    | 19 |
| A.5.5 Straightness (s) .....                                                                                  | 20 |
| A.5.6 Width flatness ( $f_w$ ) .....                                                                          | 20 |
| A.5.7 Length flatness ( $f_l$ ) .....                                                                         | 20 |
| Annex B (normative) Determination of openings and height difference between elements.....                     | 21 |
| B.1 Sampling.....                                                                                             | 21 |
| B.2 Conditioning.....                                                                                         | 21 |
| B.3 Apparatus.....                                                                                            | 21 |
| B.4 Procedure.....                                                                                            | 21 |
| B.4.1 Assembling .....                                                                                        | 21 |
| B.4.2 Determination of opening between elements (o) .....                                                     | 22 |
| B.4.3 Determination of height difference (h).....                                                             | 22 |
| B.5 Calculation and expression of results.....                                                                | 22 |

|                                                                                                            |           |
|------------------------------------------------------------------------------------------------------------|-----------|
| <b>Annex C (normative) Determination of dimensional variations after changes in relative humidity.....</b> | <b>23</b> |
| C.1 General .....                                                                                          | 23        |
| C.2 Sampling .....                                                                                         | 23        |
| C.3 Conditioning .....                                                                                     | 23        |
| C.4 Calculation and expression of results .....                                                            | 24        |
| <b>Annex D (normative) Determination of surface soundness.....</b>                                         | <b>25</b> |
| D.1 General .....                                                                                          | 25        |
| D.2 Sampling .....                                                                                         | 25        |
| D.3 Conditioning .....                                                                                     | 25        |
| D.4 Procedure .....                                                                                        | 25        |
| D.4.1 Preparing the test specimen.....                                                                     | 25        |
| D.4.2 Bonding the steel pad to the surface.....                                                            | 26        |
| D.4.3 Determination of force at fracture .....                                                             | 26        |
| D.5 Calculation and expression of results .....                                                            | 26        |
| <b>Annex E (normative) Determination of abrasion resistance and abrasion classification .....</b>          | <b>27</b> |
| E.1 Sampling .....                                                                                         | 27        |
| E.2 Conditioning .....                                                                                     | 27        |
| E.3 Apparatus .....                                                                                        | 28        |
| E.3.1 Testing machine .....                                                                                | 28        |
| E.3.2 Additional material or equipment .....                                                               | 30        |
| E.4 Procedure .....                                                                                        | 31        |
| E.4.1 General .....                                                                                        | 31        |
| E.4.2 Preparation of test specimens and abrasive papers.....                                               | 31        |
| E.4.3 Preparation of abrasive wheels.....                                                                  | 31        |
| E.4.4 Determination of the abrasion rate of abrasive paper .....                                           | 31        |
| E.4.5 Abrasion of test specimen .....                                                                      | 31        |
| E.4.6 Expression of results .....                                                                          | 32        |
| E.4.7 Test report .....                                                                                    | 33        |
| <b>Annex F (normative) Calibration and Maintenance of Abrasion equipment.....</b>                          | <b>34</b> |
| F.1 General .....                                                                                          | 34        |
| F.2 Apparatus .....                                                                                        | 34        |
| F.3 Procedure .....                                                                                        | 34        |
| F.3.1 Bearing Wear.....                                                                                    | 34        |
| F.3.2 Shaft Wear .....                                                                                     | 34        |
| F.3.3 Alignment .....                                                                                      | 35        |
| <b>Annex G (normative) Measurement of shore A hardness .....</b>                                           | <b>37</b> |
| <b>Annex H (normative) Determination of impact resistance and impact classification.....</b>               | <b>38</b> |
| H.1 General .....                                                                                          | 38        |
| H.2 Sampling .....                                                                                         | 38        |
| H.3 Apparatus .....                                                                                        | 38        |
| H.4 Procedure .....                                                                                        | 38        |
| H.4.1 Large-diameter ball test.....                                                                        | 38        |
| H.4.2 Small-diameter ball test.....                                                                        | 39        |
| <b>Bibliography .....</b>                                                                                  | <b>42</b> |