

Furniture — Strength, durability and safety — Requirements for non- domestic tables

ICS 97.140

National foreword

This British Standard is the UK implementation of EN 15372:2008.

The UK participation in its preparation was entrusted by Technical Committee FW/0, Furniture, to Subcommittee FW/0/2, Domestic and contract.

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.

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 30 June 2008

© BSI 2008

ISBN 978 0 580 55927 3

Amendments/corrigenda issued since publication

Date	Comments

ICS 97.140

English Version

Furniture - Strength, durability and safety - Requirements for non-domestic tables

Mobilier - Résistance, durabilité et sécurité - Exigences applicables aux tables à usage non domestique

Möbel - Festigkeit, Dauerhaltbarkeit und Sicherheit - Anforderungen an Tische für den Nicht-Wohnbereich

This European Standard was approved by CEN on 2 February 2008.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions.....	4
4 Test sequence	5
5 Safety requirements	5
5.1 General.....	5
5.2 Shear and squeeze points.....	5
5.2.1 Shear and squeeze points when setting up and folding.....	5
5.2.2 Shear and squeeze points under influence of powered mechanisms	5
5.2.3 Shear and squeeze points during use	5
5.3 Stability	6
5.3.1 Stability under vertical load	6
5.3.2 Stability for tables with extension elements	6
6 Strength and durability.....	6
6.1 General.....	6
6.2 Strength and durability requirements.....	7
7 Information for use	8
8 Test report	8
Annex A (normative) Drop test for tables weighing more than 20 kg	9
Annex B (informative) Deflection of table tops test	10
Annex C (informative) Test Severity in Relation to Applications	11

Foreword

This document (EN 15372:2008) has been prepared by Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by UNI.

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 September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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.

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

1 Scope

This European Standard specifies requirements for the safety, strength and durability of all types of non-domestic tables including those with glass in their construction.

It does not apply to office tables or desks, tables for educational institutions and outdoor tables for which EN standards or drafts exist.

With exception of the stability tests, this standard does not provide assessment of the suitability of any storage features included in non-domestic tables.

It does not include requirements for the durability of castors and height adjustment mechanisms.

It does not include requirements for electrical safety.

It does not include requirements for the resistance to ageing, degradation.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1730:2000, *Domestic furniture – Tables – Test methods for determination of strength, durability and stability*

EN 14072:2003, *Glass in furniture – Test methods*

EN 12150-1:2000, *Glass in building - Thermally toughened soda lime silicate safety glass - Part 1: Definition and description*

EN 12600, *Glass in building - Pendulum test - Impact test method and classification for flat glass*

3 Terms and definitions

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

3.1 accessible parts
parts to which access can easily be gained by the user when the table is in its intended configuration of use and for which the probability of unintentional user contact is high

3.2 parts accessible during setting up and folding
parts to which access can only be gained when setting up and folding the table

3.3 shear and squeeze point
shear and squeeze points exist if the distance between two accessible parts moving relative to each other is less than 18 mm or more than 7 mm in any position during movement

4 Test sequence

The tests shall be carried out in the order in which they are listed in this Standard.

5 Safety requirements

5.1 General

The table shall be designed so as to minimise the risk of injury to the user.

All parts of the table with which the user comes into contact during intended use, shall be designed so that physical injury and damage are avoided.

This requirement is met when:

- 1) edges of table tops which are directly in contact with the user are rounded or chamfered, and all other edges accessible during intended use are free from burrs and/or sharp edges,
- 2) ends of hollow components are closed or capped.

Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.

It shall not be possible for any load bearing part of the table to come loose unintentionally.

All parts which are lubricated to assist sliding shall be designed to protect users from lubricant stains when in normal use.

5.2 Shear and squeeze points

5.2.1 Shear and squeeze points when setting up and folding

Unless 5.2.2 or 5.2.3 are applicable, shear and squeeze points that are created only during setting up and folding are acceptable, because the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately upon experiencing pain.

The edges of parts moving relative to each other and creating shear and squeeze points shall be as specified in 5.1.

5.2.2 Shear and squeeze points under influence of powered mechanisms

There shall be no shear and squeeze points created by parts of the table operated by powered mechanisms, i.e. springs, gas lifts and motorised systems.

5.2.3 Shear and squeeze points during use

There shall be no shear and squeeze points created by forces applied during normal use, see Table 2.

There shall be no shear and squeeze points if a hazard is created by the user during normal movements and actions, e.g. attempting to move the table.

5.3 Stability

5.3.1 Stability under vertical load

5.3.1.1 General

Tables that can be set to heights both above and below 950 mm shall be tested to both 5.3.1.2 and 5.3.1.3.

5.3.1.2 Test for tables that are or can be set to a height of 950 mm or less

The table shall be set to the height most likely to overturn the table, but not more than 950 mm. The table shall not overturn when tested according to Clause 6.7 of EN 1730:2000 using the forces specified within Table 2.

5.3.1.3 Test for tables that are or can be set to a height greater than 950 mm

The table shall be set to the height most likely to cause overturning, but not less than 950 mm. The table shall not overturn when tested according to Clause 6.7 of EN 1730:2000 using 50 % of the forces specified within Table 2.

5.3.2 Stability for tables with extension elements

Load each extension element with the load specified in Table 1.

For tables with extension elements not fitted with interlocks, open all extension elements in the least favourable combination. For tables with extension elements fitted with interlocks, open the two extension elements with the largest loads without overriding the interlock. If an interlock device prevents any two of the extension elements from being opened simultaneously, open the extension element with the largest load.

The table shall not overturn when the vertical force specified in Table 2 is applied to the centre of the front of the table, through a loading pad (EN 1730:2000, 5.6), 50 mm from the edge.

Table 1 — Loads in extension elements

Component	Load
Extension elements designed for suspended filing only	4,0 kg/dm
Other extension elements	0,5 kg/dm ³

6 Strength and durability

6.1 General

Tables shall be tested for strength and durability according to Table 2 and following the order listed in Table 2.

When choosing the loads and cycles for each test, this shall be done with due respect to the end use of the product.

It shall be noted that some end uses may be covered by more than one requirement, depending on the severity of the expected use, e.g. restaurants, cafes, cinemas, concert halls. See also Annex C (informative).

Table 2 — Stability, strength and durability tests

Test	Reference	Loading	1	2	3
1. Stability under vertical load	EN 1730:2000, 6.7	Test force, N Main surface V ₁ V ₂ Ancillary surface V ₁ V ₂	200 400 100 200	200 400 100 200	200 400 100 200
2. Stability for tables with extension elements	5.3.2	Test force, N	200	200	200
3. Horizontal static load	EN 1730:2000, 6.2	Test force, N: high (more than 600) low (600 or less) 10 times	400 200	400 200	600 300
4. Vertical static load	EN 1730:2000, 6.3	Test force, N a) main surface b) ancillary surface 10 times	1 000 200	1 250 300	1 250 300
5. Horizontal fatigue	EN 1730:2000, 6.4	Number of cycles: Test force 300 N	10 000	15 000	20 000
6. Vertical fatigue for cantilever or pedestal tables	EN 1730:2000, 6.5	Number of cycles: Test force 300 N	10 000	15 000	20 000
7. Vertical impact for tables without glass in their construction	EN 1730:2000, 6.6	Drop height, mm: 10 times	180	180	240
8. Vertical impact for tables with glass in their construction	EN 1730:2000, 6.6 EN 14072:2003, 6²⁾	Drop height, mm: 10 times Safety glass ¹⁾ Other glass	180 240	180 240	240 300
9. Drop test for tables weighing more than 20 kg	Annex A	Nominal drop height mm – tables without glass Nominal drop height mm – tables with glass	100 50	100 50	100 50
¹⁾ Glass is considered to be safety glass if the glass fulfils the requirements in EN 12150-1:2000, Clause 8, fragmentation test; or where the mode of breakage (β) according to EN 12600, is Type B or Type C. ²⁾ Impact for the table top in accordance with the positions defined within EN 1730:2000, 6.6.					

6.2 Strength and durability requirements

The strength and durability requirements are fulfilled when after testing in accordance with Table 2:

- 1) there are no fractures of any member, joint or component,
- 2) there are no loosening of joints intended to be rigid,
- 3) table fulfils its functions after removal of the test loads,
- 4) table fulfils the stability requirements.

7 Information for use

Information for use shall be available in the language of the country in which it will be delivered to the end user. It shall contain at least the following details:

- a) information regarding the intended use, see Annex C;
- b) assembly instructions, where applicable;
- c) instruction for the care and maintenance of the table.

8 Test report

The test report shall include at least the following information:

- a) reference to this European Standard (EN 15372:2008);
- b) the piece of furniture tested;
- c) details of defects observed before testing;
- d) any variation from the specified temperature range;
- e) test results;
- f) details of any deviations from this European Standard;
- g) name and address of the test facility;
- h) date of test.

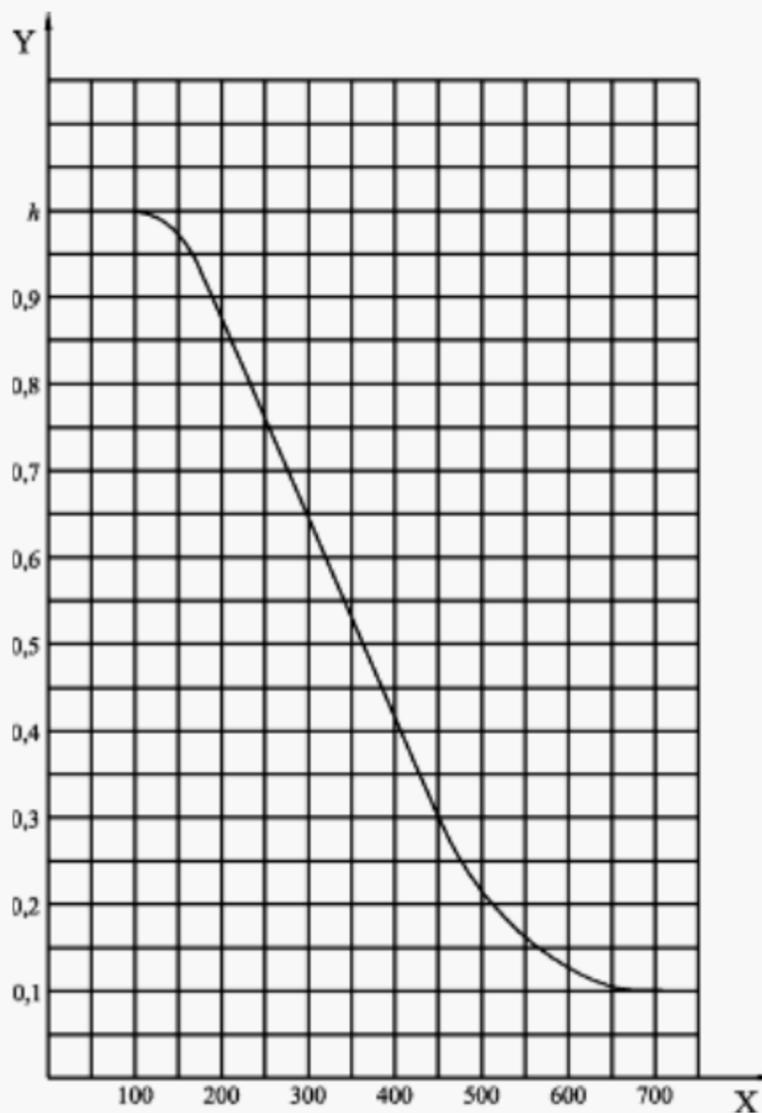
Annex A (normative)

Drop test for tables weighing more than 20 kg

A.1 Carry out the test described in EN 1730:2000, 6.8, using the drop height calculated in accordance with Figure A.1.

Carry out the test 5 times.

If the table is non-symmetrical repeat the test on the opposite end.



Key

X Force required to lift one end of a table, in Newtons

Y Drop height h as a fraction of nominal drop height given in Table 2

Figure A.1 — Drop test for tables weighing more than 20 kg

Annex B

(informative)

Deflection of table tops test

B.1 It is recommended that the test specified in B.2. should be carried out if the deflection of the main surface of the table measured in the vertical static load test (EN 1730:2000, 6.3) exceeds 1/250 of the span for wood based panels, 1/150 of the span for timber products or 1/100 of the span for other materials.

B.2 Testing of the deflection of table tops that are not made of metal, glass or stone, should be carried out in a relative humidity of 50 % RH \pm 5 % RH and a temperature of 20 ° \pm 5 °.

The deflection of the table top should be measured where it is greatest.

The greatest deflection should be measured and recorded with reference to a straight line to an accuracy of \pm 0,1 mm.

Place the table being tested on the floor surface in its normal position. Load the table top uniformly with an evenly distributed load 1,5 kg/dm².

Maintain the test load for:

- 1 h for table tops made of metal, glass and stone;
- one week for all other table tops.

Measure and record the deflection at the same points and as specified above.

Annex C (informative)

Test Severity in Relation to Applications

The following table shows the type of use that might be expected from furniture in relation to the three test severities contained in Table 2.

Table C.1 — Test severity in relation to applications

Test Severity	Type of Use	Application
1	light	hotel bedroom, church, libraries
2	general	general hotel, café, restaurant, public hall, banks, bars, meeting rooms
3	severe	night-club, police station, transport terminals, hospital public areas, casino, homes for the elderly, sports changing rooms, prisons, barracks

British Standards Institute (BSI)

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover.

Tel: +44 (0)20 8996 9000 Fax: +44 (0)20 8996 7400

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services.

Tel: +44 (0)20 8996 9001 Fax: +44 (0)20 8996 7001

Email: orders@bsigroup.com

You may also buy directly using a debit/credit card from the BSI Shop on the Website <http://www.bsigroup.com/shop>.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre.

Tel: +44 (0)20 8996 7111 Fax: +44 (0)20 8996 7048

Email: info@bsigroup.com

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration.

Tel: +44 (0)20 8996 7002 Fax: +44 (0)20 8996 7001

Email: membership@bsigroup.com

Information regarding online access to British Standards via British Standards Online can be found at <http://www.bsigroup.com/BSOL>.

Further information about BSI is available on the BSI website at <http://www.bsigroup.com>.

Copyright

Copyright subsists in all BSI publications. BSI also holds the copyright, in the UK, of the publications of the international standardization bodies. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI.

This does not preclude the free use, in the course of implementing the standard, of necessary details such as symbols, and size, type or grade designations. If these details are to be used for any other purpose than implementation then the prior written permission of BSI must be obtained.

Details and advice can be obtained from the Copyright & Licensing Manager. Tel: +44 (0)20 8996 7070 Email: copyright@bsigroup.com