SLOVENSKI STANDARD
SIST ENV 1729-2:2002

01-maj-2002

Pohištvo - Stoli in mize za vzgojno-izobraževalne ustanove - 2. del: Varnostne zahteve in preskusne metode

Furniture - Chairs and tables for educational institutions - Part 2: Safety requirements and test methods

Möbel - Stühle und Tische für Bildungseinrichtungen - Teil 2: Sicherheitstechnische Anforderungen und Prüfungen

Meubles - Chaises et tables pour les établissements d'enseignement - Partie 2: Exigences de sécurité et méthodes d'essai

Ta slovenski standard je istoveten z: **ENV 1729-2:2001**

ICS:

97.140	Pohištvo	Furniture

SIST ENV 1729-2:2002 **en**

EUROPEAN PRESTANDARD

PRÉNORME EUROPÉENNE

EUROPÄISCHE VORNORM

ENV 1729-2

May 2001

ICS 97.140

English version

Furniture - Chairs and tables for educational institutions - Part 2: Safety requirements and test methods

Meubles - Chaises et tables pour les établissements d'enseignement - Partie 2: Exigences de sécurité et méthodes d'essai

Möbel - Stühle und Tische für Bildungseinrichtungen - Teil 2: Sicherheitstechnische Anforderungen und Prüfungen

This European Prestandard (ENV) was approved by CEN on 7 April 2001 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

Ref. No. ENV 1729-2:2001 E

Contents

page

Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 207 "Furniture", the secretariat of which is held by IBN.

Annexes A and B are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Part of EN 1729 specifies safety requirements and test methods for chairs and tables for general educational purposes in educational institutions.
This European Standard does not apply to computer related and special purpose workstations, e.g. offices, laboratories, ranked seating, workshops, and spaces for design and technology.

NOTE Part 1 of this European Prestandard specifies functional dimensions and marking of chairs and tables for general educational purposes.

2 Normative references

This European Prestandard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of, any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1022:1996	Domestic furniture - Seating - Determination of stability
EN 1728:2000	Domestic furniture - Seating - Test methods - Determination of strength and durability
EN 1730:2000	Domestic furniture - Tables - Test methods for determination of strength, durability and stability
ISO 2813	Paints and varnishes - Determination of specular gloss of non-metallic paint films at 20 °, 60 ° and 85 °
ISO 7724-2	Paints and varnishes - Colorimetry - Part 2: Colour measurement

3 General test conditions

If chairs or tables in a range of size marks are manufactured, all having similar design details and geometry, it is only necessary to carry out the complete test programme on the largest chair/table in the range, plus additional drop test and seat impact test on the smallest chair in the range.

In the event of failure in any of the largest or smallest chairs/tables in the above test programme, it is necessary to carry out the complete test programme on each chair/table size mark individually.

4 Safety requirements

In order to minimize the risk of personal injury or damage to clothing, the following requirements apply:

a) all edges and corners, with which the user may come into contact during normal use, shall be smooth and shall have no burrs, and shall be rounded with a minimum radius of 2 mm;

b) distances between moving parts shall always be either maximum 8 mm or more than 25 mm and the construction shall ensure that entrapment of fingers is avoided;

c) open ends and feet of tubular components shall be capped or otherwise closed;

d) parts shall not be detachable without the use of an appropriate tool;

e) parts which are lubricated shall be covered in order to avoid staining;

f) the reflection of the working surface of tables shall be maximum 45 determined in accordance with ISO 2813 at 60°;

g) the tristimulus value of the working surface of tables shall be between 15 % and 75 % determined in accordance with ISO 7724-2;

h) chairs shall not overturn when tested as specified in 5.1.1, 5.1.2 and 5.1.3;

i) chairs shall show no structural failure which can affect safety when tested for strength and durability as specified in 5.2.1 to 5.2.9 and it shall still fulfil its function;

j) tables shall not overturn when tested in accordance with 6.7 of EN 1730:2000;

k) tables shall show no structural failure which can affect safety when tested for strength and durability as specified in 6.2.1 to 6.2.5 and it shall still fulfil its function.

5 Testing of chairs

NOTE The static loads specified in clause 5 reproduce the loads applied by adults, who may occasionally sit on small chairs. These loads are sufficiently large to make it unnecessary to carry out durability tests on the smaller chair size marks in 5.2.4, 5.2.5 and 5.2.6.

5.1 Stability

The stability of chairs shall be tested according to EN 1022:1996 but using the loads, forces and loading points specified below. Both the practical and the calculative method may be applied.

5.1.1 Forward stability

The forward stability of chairs shall be tested in accordance with 7.1 or 9.2 of EN 1022:1996, except that the seat loads and the horizontal forces for the various chair sizes shall be as given in Table 1.

TABLE 1 - Forward stability of chairs

Chair size mark	Seat load	Horizontal force
1	200 N	20 N
2	250 N	20 N
3	350 N	30 N
4	500 N	40 N
5	600 N	50 N
6	800 N	70 N
7	800 N	70 N

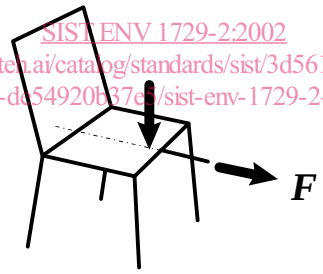

Figure 1 - Illustration of test

5.1.2 Sideways stability

The sideways stability of chairs shall be tested in accordance with 7.2, 7.3 or 9.2, 9.3 of EN 1022:1996, except that the seat loads and the horizontal forces for the various chair sizes shall be as given in Table 2.

TABLE 2 - Sideways stability of chairs

Chair size mark	Seat load	Horizontal force
1	200 N	40 N
2	250 N	50 N
3	350 N	60 N
4	500 N	70 N
5	600 N	70 N
6	800 N	90 N
7	800 N	90 N

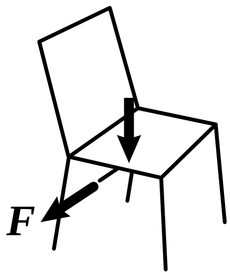

Figure 2 - Illustration of test

5.1.3 Rearwards stability

The rearwards stability of chairs shall be tested in accordance with 7.4 or 9.5 of EN 1022:1996, except that the seat loads, the horizontal forces and the loading points for the various chair sizes shall be as given in Table 3.

TABLE 3 - Rearward stability of chairs

Chair size mark	Seat load	Back to seat loading point	Seat to back loading point	Back force
1	200 N	120 mm	180 mm	50 N
2	250 N	130 mm	200 mm	70 N
3	350 N	145 mm	250 mm	100 N
4	500 N	160 mm	300 mm	130 N
5	600 N	175 mm	300 mm	180 N
6	800 N	185 mm	300 mm	210 N
7	800 N	185 mm	300 mm	210 N

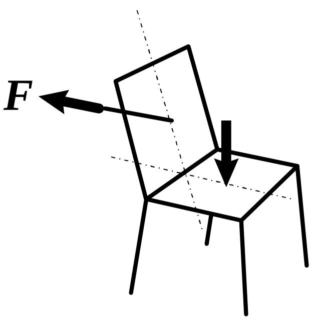

Figure 3 - Illustration of test

5.2 Strength and durability

The strength and durability of chairs shall be tested in accordance with EN 1728 as specified below.

5.2.1 Seat static load (EN 1728:2000, 6.2)

TABLE 4 - Seat static load of chairs

Chair size mark	Cycles	Load
1	10	1300 N
2	10	1600 N
3	10	2000 N
4	10	2000 N
5	10	2000 N
6	10	2000 N
7	10	2000 N

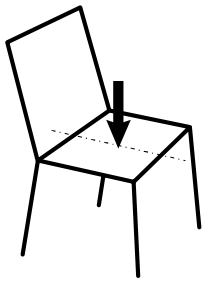

Figure 4 - Illustration of test

5.2.2 Back static load (EN 1728:2000, 6.2)

TABLE 5 - Back static load of chairs

Chair size mark	Cycles	Load
1	10	410 N
2	10	560 N
3	10	760 N
4	10	760 N
5	10	760 N
6	10	760 N
7	10	760 N

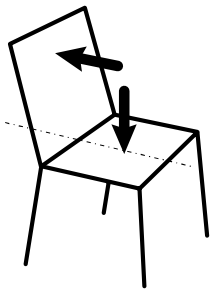

Figure 5 - Illustration of test