SLOVENSKI STANDARD
SIST EN 1192:2000

01-maj-2000

Vrata - Klasifikacija po zahtevah za trdnost

Doors - Classification of strength requirements

Türen - Klassifizierung der Festigkeitsanforderungen

Portes - Classification des exigences de résistance mécanique

Ta slovenski standard je istoveten z: **EN 1192:1999**

ICS:

91.060.50	Vrata in okna	Doors and windows

SIST EN 1192:2000 **en**

EUROPEAN STANDARD
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English version

Doors - Classification of strength requirements

Portes - Classification des exigences de résistance mécanique

Türen - Klassifizierung der Festigkeitsanforderungen

This European Standard was approved by CEN on 20 September 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters and building hardware", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by May 2000, and conflicting national standards shall be withdrawn at the latest by May 2000.

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

This standard is one of a series of standards for doors. The performance levels relate to test methods published in EN 947, EN 948, EN 949 and EN 950.

This standard presents a partial, provisional and interim classification for doors, restricted to the aspect of mechanical strength in resisting vertical load, static torsion, soft and heavy body impact, and hard body impact. It is intended to establish a standard for a complete classification scheme which includes all relevant properties valid for different families of doors.

The standard includes 'an informative annex' A which gives general guidance on the relationship between performance levels and categories of duty.

1 Scope

This standard provides a means of classifying where appropriate, the performance of door leaves, door frames, doorsets, and door assemblies according to their strength in resisting vertical load, static torsion, soft and heavy body impact, and hard body impact. The performance levels indicate normal usage for a range of categories of duty. Special requirements such as those for burglar resistance or safety requirements related to glass infillings are not covered.

2 Normative references

This European Standard 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 Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 947	Hinged or pivoted doors - Determination of the resistance to vertical load.
EN 949	Windows and curtain walling, doors, blinds and shutters - Determination of the resistance to soft and heavy body impact for doors.
EN 948	Hinged or pivoted doors - Determination of the resistance to static torsion.
EN 950	Door leaves - Determination of the resistance to hard body impact.

3 Definitions

For the purposes of this standard the following definitions apply:-

3.1 door assembly: A complete assembly as installed, comprising door frame and one or more leaves, together with its essential hardware supplied from separate sources.

3.2 door set: A complete unit consisting of a door frame and a door leaf or leaves, supplied with the essential hardware and wheatherseal, as a product from a single source.

4 Requirements

Imposed stresses and accidental impacts on doors shall neither damage them nor impair their performance.

4.1 General

The attributes are identified in clauses 4.2, 4.3, 4.4 and 4.5. After testing against attributes 4.2, 4.3 and 4.4 the test specimen shall continue to function normally. Application of the tests shall not result in the specimen suffering such damage or deformation, including loosening of hardware or joints, which render it unfit for its purpose, nor shall any of its composite parts become dislodged or shattered. Small fissures in timber in the vicinity of the lock, latch or keep are permitted provided the hardware is neither loosened or dislodged and the door maintains its functionality.

4.2 Resistance to vertical load

Hinged or pivoted doors shall be tested in accordance with EN 947. This specifies the method to be used to determine the permanent deformation caused when a vertical load is applied to the free edge of an open door leaf fixed in its own frame.

The load to be applied shall be selected from the performance levels given in table 1. For a door to qualify for a particular performance class, the resultant residual deformation measured in accordance with EN 947 shall not exceed 1 mm.

4.3 Resistance to static torsion

Hinged or pivoted doors shall be tested in accordance with EN 948. This specifies the method to be used to determine the permanent deformation caused when static stress in torsion is applied to an open door leaf fixed in its own frame.

The load to be applied shall be selected from the performance classes given in table 1. For a door to qualify for a particular performance class, the resultant residual deformation measured in accordance with EN 948 shall not exceed 2 mm.

4.4 Resistance to soft and heavy body impact

Hinged, pivoted or sliding doors shall be tested in accordance with EN 949. This specifies the method to be used to determine the damage caused by striking with a soft and heavy body, the face of a closed door leaf fixed in its own frame.

The impact energy to be applied shall be selected from the performance levels given in table 1.It shall be applied three times to each face of the door leaf.

For a door to qualify for a particular performance class, the resultant residual deformation in flatness measured in accordance with EN 949 shall not exceed 2 mm.

4.5 Resistance to hard body impact

Door leaves shall be tested in accordance with EN 950. This specifies the method to be used to determine the damage caused to a door leaf by the impact of a hard object. The test shall be used to determine the structural integrity of the construction and not the effect of such impacts upon appearance.

The impact energy to be applied shall be selected from the performance levels given in table 1. For a door to qualify for a particular performance class, the mean value of the diameters of indentations shall not exceed 20 mm and the mean value of the depths of indentations caused shall not exceed 1,0 mm, and the maximum value shall not exceed 1,5 mm.

5 Classification of mechanical strength

Four classes are defined in the classification system shown in table 1.

Hinged or pivoted doors shall be subjected in turn to tests 1, 2, 3 and 4. Sliding doors shall be subjected to tests 3 and 4 only. To qualify for an overall performance class, the requirements of all relevant tests shall be satisfied at that level.

Alternatively, it is permitted to indicate performance by reference to the individual class achieved for each test.

Table 1: Classification and load/energy values to be applied

Test	Resistance to:	Class 1	Class 2	Class 3	Class 4
1	Vertical load, N	400	600	800	1000
2	Static torsion, N	200	250	300	350
3	Soft and heavy body impact, J	30	60	120	180
4	Hard body impact, J	1,5	3	5	8

Annex A (informative)

Information for users

Doors are employed in a range of situations in buildings varying from an interior door in a dwelling which is used rarely, or an external door of a dwelling leading onto gravel and then generally with care, to an entrance door of a shop which is in constant use by people who have little incentive to exercise care and who may be carrying bulky objects or propelling trolleys. This is a wide spectrum of use, but for all practical purposes, this range can be covered by the four performance classes given in this standard.

Generally, it is desirable to state the specific use and requirements of the product. However, where this is not possible, the general guidance given in table A1 can be used to assist in the selection of appropriate classes.

Table A1 (informative): Classes and categories of duty

Class	Category of duty	Description
1 - 2	Light to medium duty	Low frequency of use with care, for example by private house owners where there is a small chance of accident occurring or of misuse.
2 - 3	Medium to heavy duty	Medium frequency of use primarily with care, where there is some chance of accident occurring or of misuse.
3 - 4	Heavy to severe duty	High frequency of use without care, where there is a good chance of accident occurring or of misuse.
4	Severe duty	Subject to frequent violent usage.