

Secure storage units — Classification for high security locks according to their resistance to unauthorized opening

ICS 13.310; 91.190

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National foreword

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It is being issued in the Draft for Development series of publications and is of a provisional nature because experience is required of the test methods included. It should be applied on this provisional basis so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion into a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its three-year life. The commencement of the review period will be notified by an announcement in *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Technical Committee GW/2, Safes, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, if possible, an appropriate revision of the text.

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

Cross-references

The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ENV title page, pages 2 to 20 and a back cover.
This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

This Draft for Development, having been prepared under the direction of the Consumer Products and Services Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 April 1999

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ISBN 0 580 32210 6

Amendments issued since publication

Amd. No.	Date	Comments

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ICS 13.310

Descriptors: Safes, storage furniture, document storage, safety devices, burglar resistance, safety locks, codes, specifications, designation, classifications, tests, marking

English version

Secure storage units — Classification for high security locks according to their resistance to unauthorized opening

Unités de stockage en lieux sûrs —
Classification des serrures haute sécurité en
fonction de leur résistance à l'effraction

Wertbehältnisse — Klassifizierung von
Hochsicherheitsschlössern nach ihrem
Widerstandswert gegen unbefugtes Öffnen

This European Prestandard (ENV) was approved by CEN on 17 January 1999 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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 263 “Secure storage of cash, valuables and data media”, the secretariat of which is held by BSI.

This European standard has been prepared by a working group (3) of CEN/TC 263 as one of a series of standards for secure storage of cash valuables and data media. Other standards in the series have the following titles and further standards are in preparation:

EN 1047-1, *Secure storage units — Classification and methods of test for resistance to fire — Part 1: Data cabinets.*

prEN 1047-2, *Secure storage units — Classification and methods of test for resistance to fire — Part 1: Data rooms.*

EN 1143-1, *Secure storage units — Methods of test and classification for resistance to burglary — Part 1: Safes and strongrooms.*

prEN 1143-2, *Secure storage units — Requirements, classification and methods of test for resistance to burglary — Part 2: Deposit systems.*

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.

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1 Scope

This European standard specifies requirements for high security locks (HSL) for their reliability, resistance to burglary and unauthorized opening together with methods of test. It also gives a classification scheme for HSL according to their security.

It applies to mechanical and electronic HSL. It does not apply to optional features which can increase the overall security of a system such as:

- 1) master code for preventing code altering and/or enabling/disabling parallel codes
- 2) time code for disabling time set up
- 3) integration of alarm components or functions
- 4) remote control duties
- 5) resistance to attacks with acids
- 6) resistance to X-rays
- 7) resistance to explosives

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 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.

IEC 68-2-6:1995, *Environmental testing — Part 2: Test Fc: Vibration (sinusoidal)*.

EN 50130-4:1995, *Alarm systems — Part 4: Electromagnetic compatibility — Product family standard. Immunity requirements for components of fire, intruder and social alarm systems*.

IEC 1000-4-3:1995, *Electromagnetic compatibility (EMC) — Part 4: Testing and measuring techniques — Section 3: Radiated electromagnetic field immunity tests*.

IEC 1000-4-4:1995, *Electromagnetic compatibility (EMC) — Part 4: Testing and measuring techniques — Section 4: Electrical fast transient/burst immunity test*.

IEC 1000-4-2:1995, *Electromagnetic compatibility (EMC) — Part 4: Testing and measuring techniques — Section 2: Electrostatic discharge immunity test*.

IEC 1000-4-5:1995, *Electromagnetic compatibility (EMC) — Part 4: Testing and measuring techniques — Section 5: Surge immunity test*.

IEC 1000-4-6:1995, *Electromagnetic compatibility (EMC) — Part 4: Testing and measuring techniques — Section 6: Immunity to conducted disturbances, induced by radio-frequency fields*.

IEC 1000-4-11:1994, *Electromagnetic compatibility (EMC) — Part 4: Testing and measuring techniques — Section 11: Voltage dips, short interruptions and voltage variations immunity tests*.

EN 1143-1:1996, *Secure storage units — Methods of test and classification for resistance to burglary — Part 1: Safes and strongrooms*.

EN 50081-1:1992, *Electromagnetic compatibility — Generic emission standard — Part 1: Residential, commercial and light industry*.

ISO 6988:1985, *Metallic and other non organic coatings — Sulfur dioxide test with general condensation of moisture*.

3 Definitions

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

3.1

High Security Lock (HSL)

independent assembly normally fitted to doors of secure storage units, into which a coded input can be entered for comparison with a memorized code; a correct match of the codes allows movement of a blocking feature

3.2 code

Identification information required which can be input into a HSL and which, if correct, enables the security status of the HSL to be changed.

3.2.1

opening code

identification information which allows opening of the HSL

3.2.2

recognized code

identification information which gives access to the processing unit. It may also be an opening code

3.2.3

duress code

parallel code which initiates some additional function(s)

3.3 coding means

Any method by which the code is held.

3.3.1

material code

code defined by the physical features or other properties of a token

3.3.2

mnemonic code

remembered code consisting of numeric and/or alphabetic information

3.3.3

biometric code

code operated by means of human characteristics

3.4

processing unit

part which evaluates whether the input code is correct and enables or prevents movement of a locking device

3.5

locking device

part of the HSL which enables or prevents the moving of the blocking feature

3.6

token

object whose physical form or properties defines the input code, e.g. a key

3.7

mechanical HSL

HSL secured by means of mechanical elements only

3.8

electronic HSL

HSL secured partly or fully with electrical or electronic elements

3.9

blocking feature

part of HSL which, after entering the correct opening code moves, or can be moved, to either secure a door or prevent movement of a boltwork. The bolt of a mechanical lock is an example of a blocking feature

3.10

destructive burglary

attack which damages the HSL in a manner which is irreversible and which cannot be hidden from the authorized user

3.11

reliability

ability to function and achieve the security requirements of this standard after a large number of duty cycles

3.12

manipulation

method of attack aimed at removing the blocking function without causing damage obvious to the user

NOTE A HSL may function after manipulation although its security could be permanently degraded.

3.13

spying

attack which involves identification of the correct code without touching the HSL or contacting it with a tool

3.14

usable codes

codes or tokens permitted by the manufacturer and conforming to the requirements of this standard

NOTE For mechanical HSL the number of usable codes is much less than the total number of codes to which the HSL can be set.

3.15

monitoring

spying or unauthorized recognising of the code input by any means including the use of instruments

3.16

observation

spying or unauthorized recognising of the code input by human means

3.17

scrambled condition

coding elements are not in the configuration necessary for the HSL to be opened without entering the complete correct code or proper token

3.18

locking sequence

series of actions which start with an open door and are complete when the door is closed, bolted, locked and secure

3.19

open door

door is not in its frame

3.20

closed door

door is within its frame ready for throwing bolt(s)

3.21

bolted door

bolts are thrown

3.22

locked door

boltwork cannot be withdrawn because of the HSL

3.23

secured door

door is closed, bolted and locked with an HSL in the secured HSL condition