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## European foreword

This document (EN 15659:2019) 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 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15659:2009.

Compared with EN 15659:2009, the following changes were made:

- The protection levels were renamed from LFS 30 P and LFS 60 P to LFS 30 and LFS 60;
- that customers know the difference between this fire resistance standard and the fire resistance standard EN 1047-1, the scope of the standard was adapted;
- as the standard could lead to different interpretations in different test houses regarding the choice of test specimens a new [Clause 5](#) and an [Annex A](#) have been added as well as [Clause 6.1](#) has been adapted;
- due to testing knowledge gained since the publication of the standard EN 15659 in 2009 it could be seen that the depth is not as critical as the width of a specimen. Therefore, the tolerance on the depth was changed from  $\pm 15\%$  to  $\pm 20\%$ ;
- the fire exposure time now starts from the beginning of the test ([7.4.2](#));
- the requirement for the 3 % wall tolerance has been updated in [clause 5.1](#) (for series production) and [6.2](#) (for the test specimens);
- a shrinking tube for the measuring device cables is not needed anymore ([7.3.3](#)), the testing laboratory doesn't need to turn off the flames after 30 min or 60 min ([7.4.2](#)) and the photographic record shall now also include details of the interior of the test specimen. ([7.4.3](#));
- references to the standards have been updated;
- editorial changes have been made in [3.1](#), [3.2](#), [4.1](#), [4.2](#), [6.1](#), [6.2](#) and [7.4.1](#).

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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 the United Kingdom.

## Introduction

The testing conditions given in this document provide a basis for simulating fires to determine, in a reproducible way, the fire resistance of light fire storage units at various protection levels. The protection levels enable a comparison to be made of the resistance against fire provided by different constructions.

The threshold value for the maximum temperature increase of 150 K at every measuring point in the protection levels LFS 30 and LFS 60 for light fire storage units from a starting temperature of  $(21 \pm 1)^\circ\text{C}$ , as defined in this document, refers to the relatively short-term stress due to high temperatures during a fire test. It is not normally experienced by paper media stored in light fire storage units in the normal and correct way.

## 1 Scope

This document specifies requirements for light fire storage units providing protection against fire.

The method of test is specified to determine the ability of light fire storage units to protect paper media from the effects of fire. Two levels of fire exposure periods (LFS 30 and LFS 60) are specified using the maximum temperature increase permitted within the storage space of the light fire storage unit.

Protection after the fire exposure of 30 min (LFS 30) or 60 min (LFS 60) is not ensured by this document, but by European Standard EN 1047-1. Requirements are also specified for the test specimen, the technical documentation for the test specimen, correlation of the test specimen with the technical documentation, preparation for type testing and test procedures.

A scheme to classify the light fire storage units from the test results is also given (see [Table 1](#)).

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1363-1:2012, *Fire resistance tests - Part 1: General Requirements*

EN 60584-1, *Thermocouples - Part 1: EMF specifications and tolerances*

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

### 3.1

#### **light fire storage unit**

storage unit designed to protect paper media, except for paper grades where data loss occurs at temperatures below 170°C, as well as valuables against the effects of temperatures up to 170°C

Note 1 to entry: A light fire storage unit can have doors, drawers, lids, connections, compartments and fittings.

### 3.2

#### **compartment**

part of a light fire storage unit which can be closed with a separate door, lid or cover

Note 1 to entry: A compartment formed by inserting

### 3.3

#### **lock**

device which verifies an entered code and performs a blocking function on the boltwork of the door