EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

FINAL DRAFT
FprEN 1996-1-2

April 2024

ICS 13.220.50; 91.010.30; 91.080.30

Will supersede EN 1996-1-2:2005

English Version

Eurocode 6 - Design of masonry structures - Part 1-2: Structural fire design

Eurocode 6 - Calcul des ouvrages en maçonnerie - Partie 1-2 : Calcul du comportement au feu

Eurocode 6 - Bemessung und Konstruktion von Mauerwerksbauten -Teil 1-2: Tragwerksbemessung für den Brandfall

This draft European Standard is submitted to CEN members for formal vote. It has been drawn up by the Technical Committee CEN/TC 250.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

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Ref. No. FprEN 1996-1-2:2024 E

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European foreword

This document (FprEN 1996-1-2:2024) has been prepared by Technical Committee CEN/TC 250 "Structural Eurocodes", the secretariat of which is held by BSI. CEN/TC 250 is responsible for all Structural Eurocodes and has been assigned responsibility for structural and geotechnical design matters by CEN.

This document is currently submitted to the Formal Vote.

This document will supersede EN 1996-1-2:2005 + AC:2010.

The first generation of EN Eurocodes was published between 2002 and 2007. This document forms part of the second generation of the Eurocodes, which have been prepared under a Mandate M/515 given to CEN by the European Commission and the European Free Trade Association.

The Eurocodes have been drafted to be used in conjunction with relevant execution, material, product and test standards, and to identify requirements for execution, materials, products and testing that are relied upon by the Eurocodes.

The main changes compared to the previous edition are listed below:

— reduced factor η_{fi} for buildings with timber floors;

— deletion of old Annex A containing guidance on selection of fire resistance periods;

— update of old Annex B (as new Annex A) tabulated data, taking into account recent test evidence;

— new Annex B with information on input parameters for calculation methods, replacing old Annexes C and D;

— the structure and the table of contents was harmonized with the fire parts of the other material related Eurocodes.

The Eurocodes recognize the responsibility of each Member State and have safeguarded their right to determine values related to regulatory safety matters at national level through the use of National Annexes.

0 Introduction

0.1 Introduction to the Eurocodes

The Structural Eurocodes comprise the following standards generally consisting of a number of parts:

— EN 1990 Eurocode — Basis of structural and geotechnical design

— EN 1991 Eurocode 1 — Actions on structures

— EN 1992 Eurocode 2 — Design of concrete structures

— EN 1993 Eurocode 3 — Design of steel structures

— EN 1994 Eurocode 4 — Design of composite steel and concrete structures

— EN 1995 Eurocode 5 — Design of timber structures

— EN 1996 Eurocode 6 — Design of masonry structures

— EN 1997 Eurocode 7 — Geotechnical design

— EN 1998 Eurocode 8 — Design of structures for earthquake resistance

— EN 1999 Eurocode 9 — Design of aluminium structures

— New parts are under development, e.g. Eurocode for design of structural glass.

The Eurocodes are intended for use by designers, clients, manufacturers, constructors, relevant authorities (in exercising their duties in accordance with national or international regulations), educators, software developers, and committees drafting standards for related product, testing and execution standards.

NOTE Some aspects of design are most appropriately specified by relevant authorities or, where not specified, can be agreed on a project-specific basis between relevant parties such as designers and clients. The Eurocodes identify such aspects making explicit reference to relevant authorities and relevant parties.

0.2 Introduction to EN 1996 (all parts)

EN 1996 (all parts) applies to the design of building and civil engineering works, or parts thereof, in unreinforced, reinforced, prestressed and confined masonry.

EN 1996 (all parts) deals only with the requirements for resistance, serviceability, and durability of structures. Other requirements, for example, concerning thermal or sound insulation, are not considered.

EN 1996 (all parts) does not cover the special requirements of seismic design. Provisions related to such requirements are given in EN 1998, which complements, and is consistent with EN 1996.

EN 1996 (all parts) does not cover numerical values of the actions on building and civil engineering works to be taken into account in the design. They are provided in EN 1991.

0.3 Introduction to EN 1996-1-2

This document, together with EN 1991-1-2, supplements EN 1996-1-1 so that the design of masonry structures complies with fire requirements.

0.4 Verbal forms used in the Eurocodes

The verb “shall” expresses a requirement strictly to be followed and from which no deviation is permitted in order to comply with the Eurocodes.

The verb “should” expresses a highly recommended choice or course of action. Subject to national regulation and/or any relevant contractual provisions, alternative approaches could be used/adopted where technically justified.

The verb “may” expresses a course of action permissible within the limits of the Eurocodes.

The verb “can” expresses possibility and capability; it is used for statements of fact and clarification of concepts.

0.5 National annex for EN 1996-1-2

National choice is allowed in this standard where explicitly stated within notes. National choice includes the selection of values for Nationally Determined Parameters (NDPs).

The national standard implementing EN 1996-1-2 can have a National annex containing all national choices to be used for the design of buildings and civil engineering works to be constructed in the relevant country.

When no national choice is given, the default choice given in this standard is to be used.

When no national choice is made and no default is given in this standard, the choice can be specified by a relevant authority or, where not specified, agreed for a specific project by appropriate parties.

National choice is allowed in EN 1996-1-2 through notes to the following clauses:

4.5(1)	A.4(1)	A.5(1)	A.6(1)
A.7(1)	A.8(1)		

National choice is allowed in EN 1996-1-2 on the application of the following informative annexes:

Annex B	Annex C

The National annex can contain, directly or by reference, non-contradictory complementary information for ease of implementation, provided it does not alter any provisions of the Eurocodes.

1 Scope

1.1 Scope of EN 1996-1-2

(1) This document gives rules for the design of masonry structures for the accidental design situation of fire exposure. This document only identifies differences from, or supplements to, normal temperature design.

(2) This document applies to structures, or parts of structures, which are within the scope of EN 1996-1-1 or EN 1996-3 and are designed accordingly.

(3) This document gives rules for the design of structures for specified requirements in respect of the functions given in (5) and the levels of performance.

(4) This document does not cover masonry built with natural stone units according to EN 771-6.

(5) This document deals with:

— non-loadbearing internal walls;

— non-loadbearing external walls;

— loadbearing internal walls with separating or non-separating functions;

— loadbearing external walls with separating or non-separating functions.

1.2 Assumptions

(1) The assumptions of EN 1990 and EN 1996-1-1 apply to this document.

(2) This document is intended to be used together with EN 1990, EN 1991-1-2, EN 1996-1-1, EN 1996-2 and EN 1996-3.

(3) In addition to the general assumptions of EN 1990 and EN 1996-1-1, the following assumptions apply:

— the choice of the relevant design fire scenario is made by appropriately qualified and experienced personnel, or is given by the relevant national regulation;

— any fire protection measure taken into account in the design will be adequately maintained.

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.

NOTE See the Bibliography for a list of other documents cited that are not normative references, including those referenced as recommendations (i.e. in ‘should’ clauses), permissions (‘may’ clauses), possibilities ('can' clauses), and in notes.

EN 1363-2, *Fire resistance tests — Part 2: Alternative and additional procedures*

EN 1364-1, *Fire resistance tests for non-loadbearing elements — Part 1: Walls*

EN 1366-4, *Fire resistance tests for service installations — Part 4: Linear joint seals*

EN 1990:2023, *Eurocode — Basis of structural and geotechnical design*