

Geregistreeerde Belgische norm

NBN EN 1998-2

1e uitg., maart 2006

Normklasse: B 03

Eurocode 8 - Ontwerp en berekening van aardbevingsbestendige constructies - Deel 2 : Bruggen (+ AC:2010)

Eurocode 8 - Calcul des structures pour leur résistance aux séismes - Partie 2 : Ponts (+ AC:2010)

Eurocode 8 - Design of structures for earthquake resistance - Part 2 : Bridges (+ AC:2010)

Toelating tot publicatie: 31 december 2005

Deze Europese norm EN 1998-2:2005 heeft de status van een Belgische norm.

Hij bestaat in drie officiële versies (Duits, Engels, Frans).

Een Nederlandstalige vertaling is voorzien, die onder verantwoordelijkheid van het Bureau voor Normalisatie (NBN) zal gepubliceerd worden en dezelfde waarde zal krijgen.

Deze norm mag in België slechts samen met zijn Nationale Bijlage (ANB) worden toegepast. Deze laatste legt hoofdzakelijk de waarden van de parameters vast die op nationaal vlak worden bepaald.

Er is bij het NBN ook een Nederlandstalige versie beschikbaar, die dezelfde status heeft als de officiële versies.

*norme belge
enregistrée*

NBN EN 1998-2

1e éd., mars 2006

Indice de classement: B 03

**Eurocode 8 - Calcul des structures pour leur résistance aux séismes -
Partie 2 : Ponts (+ AC:2010)**

Eurocode 8 - Ontwerp en berekening van aardbevingsbestendige constructies - Deel 2 : Bruggen (+ AC:2010)

Eurocode 8 - Design of structures for earthquake resistance - Part 2 : Bridges (+ AC:2010)

Autorisation de publication: 31 décembre 2005

La présente norme européenne EN 1998-2:2005 a le statut d'une norme belge.

La présente norme européenne existe en trois versions officielles (allemand, anglais, français).

La version néerlandaise est prévue sous la responsabilité du Bureau de Normalisation (NBN) et aura la même valeur.

Cette norme ne peut être utilisée en Belgique qu'en combinaison avec son Annexe Nationale (ANB) qui fixe principalement la valeur des paramètres à déterminer au niveau national.

Une version en néerlandais, ayant le même statut que les versions officielles, est également disponible au NBN.



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Nationaal voorwoord van NBN EN 1998-2

1. De norm NBN EN 1998-2:2006 «Eurocode 8 – Ontwerp en berekening van aardbevingsbestendige constructies – Deel 2 : Bruggen» (publicatie in 2006 door het NBN van EN 1998-2:2005, gepubliceerd door het CEN in november 2005) omvat de Nationale Bijlage NBN EN 1998-2 ANB:2013 met een normatief karakter in België. Hij vervangt vanaf de datum van de publicatie in het Belgisch Staatsbad van de bekrachtiging van de norm NBN EN 1998-2 ANB:2013 de volgende norm:

ENV 1998-2:1994 «EUROCODE 8 – Ontwerpbepalingen voor aardbevingsbeveiligend ontwerpen van draagsystemen – Deel 2: Bruggen»

2. De Nederlandstalige versie van EN 1998-2 wordt opgesteld in samenwerking tussen NBN en NEN. Daarbij wordt voor elk begrip een unieke woordkeuze gemaakt. Dit heeft voor gevolg dat in de norm uitdrukkingen voorkomen die in één van de twee landen minder gebruikelijk zijn. Hierna volgt reeds een voorlopige lijst met synoniemen:

Oorspronkelijke term (Engels)	Verplichte term (Nederlands)	Synoniem (B); (N)
accidental situation	buitengewone situatie	bijzondere situatie (N); buitengewone toestand (B)

- 2bis. De Europese normen (EN) waarnaar de tekst van deze norm met hun Engelse titel verwijst, dragen in België de volgende Nederlandstalige titels:

<u>vermelde norm</u> (CEN)	<u>Belgische norm</u> (NBN)	<u>Nederlandstalige titel bij het NBN</u>
EN 1337-2	NBN EN 1337-2:2004	Opleggingen voor het bouwwezen - Deel 2: Glijdelen
EN 1337-3	NBN EN 1337-3:2005	Opleggingen voor het bouwwezen - Deel 3: Opleggingen van elastomeren
prEN 15129:2005	(normontwerp)	Seismische dempers

3. Aanvullende opmerking van het NBN:
De verbeteringen begrepen in het addendum EN 1998-2:2005/A1, het addendum EN 1998-2:2005/A2 en het corrigendum EN 1998-2:2005/AC behoren te worden aangebracht in deze Nederlandstalige versie van NBN EN 1998-2:2006

Avant-propos national à la NBN EN 1998-2:2006

1. La norme NBN EN 1998-2:2006 «Eurocode 8 – Calcul des structures pour leur résistance aux séismes – Partie 2 : Ponts» (publication en 2006 par le NBN de la EN 1998-2:2005, publiée par le CEN en novembre 2005) comprend l'Annexe Nationale NBN EN 1998-2 ANB:2011 qui a un caractère normatif en Belgique. Elle remplace à partir de la publication au Moniteur Belge de l'homologation de la norme NBN EN 1998-2 ANB:2011 la norme suivante :

ENV 1998-2:1994 «Eurocode 8 – Conception et dimensionnement des structures pour la résistance aux séismes – Partie 2 : Ponts»

2. La version de langue française de l'EN 1998-2 a été rédigée en France par l'AFNOR. En conséquence, on y rencontre certaines expressions d'usage moins courant en Belgique.

Une liste de termes équivalents est donnée ci-après :

Terme de l'EN 1998-5	Terme équivalent en Belgique
[exemple] poteau client	colonne le maître de l'ouvrage assisté de ses bureaux d'architectes, d'ingénierie et de consultance

3. Note complémentaire de la NBN :
Les corrections contenues dans l'addendum EN 1998-2:2005/A1 édité par le CEN en mai 2009, dans l'addendum EN 1998-2:2005/A2 édité par le CEN en novembre 2011 et dans le corrigendum EN 1998-2:2005/AC édité par le CEN en février 2010 sont à apporter à la version française de la NBN EN 1998-2:2006.

English Version

Eurocode 8 - Design of structures for earthquake resistance - Part 2: Bridges

Eurocode 8 - Calcul des structures pour leur résistance aux
séismes - Partie 2: Ponts

Eurocode 8 - Auslegung von Bauwerken gegen Erdbeben -
Teil 2: Brücken

This European Standard was approved by CEN on 7 July 2005.

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.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This European Standard EN 1998-2, Eurocode 8: Design of structures for earthquake resistance: Bridges, has been prepared by Technical Committee CEN/TC250 «Structural Eurocodes», the Secretariat of which is held by BSI. CEN/TC250 is responsible for all Structural Eurocodes.

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 2006, and conflicting national standards shall be withdrawn at latest by March 2010.

This document supersedes ENV 1998-2:1994.

According to the CEN-CENELEC Internal Regulations, the National Standard Organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Background of the Eurocode programme

In 1975, the Commission of the European Community decided on an action programme in the field of construction, based on article 95 of the Treaty. The objective of the programme was the elimination of technical obstacles to trade and the harmonisation of technical specifications.

Within this action programme, the Commission took the initiative to establish a set of harmonised technical rules for the design of construction works which, in a first stage, would serve as an alternative to the national rules in force in the Member States and, ultimately, would replace them.

For fifteen years, the Commission, with the help of a Steering Committee with Representatives of Member States, conducted the development of the Eurocodes programme, which led to the first generation of European codes in the 1980s.

In 1989, the Commission and the Member States of the EU and EFTA decided, on the basis of an agreement¹ between the Commission and CEN, to transfer the preparation and the publication of the Eurocodes to CEN through a series of Mandates, in order to provide them with a future status of European Standard (EN). This links *de facto* the Eurocodes with the provisions of all the Council's Directives and/or Commission's Decisions dealing with European standards (*e.g.* the Council Directive 89/106/EEC on construction products - CPD - and Council Directives 93/37/EEC, 92/50/EEC and 89/440/EEC on public works and services and equivalent EFTA Directives initiated in pursuit of setting up the internal market).

¹ Agreement between the Commission of the European Communities and the European Committee for Standardisation (CEN) concerning the work on EUROCODES for the design of building and civil engineering works (BC/CEN/03/89).

The Structural Eurocode programme comprises the following standards generally consisting of a number of Parts:

EN 1990	Eurocode:	Basis of structural 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

Eurocode standards recognise the responsibility of regulatory authorities in each Member State and have safeguarded their right to determine values related to regulatory safety matters at national level where these continue to vary from State to State.

Status and field of application of Eurocodes

The Member States of the EU and EFTA recognise that Eurocodes serve as reference documents for the following purposes:

- as a means to prove compliance of building and civil engineering works with the essential requirements of Council Directive 89/106/EEC, particularly Essential Requirement N°1 – Mechanical resistance and stability – and Essential Requirement N°2 – Safety in case of fire;
- as a basis for specifying contracts for construction works and related engineering services;
- as a framework for drawing up harmonised technical specifications for construction products (ENs and ETAs).

The Eurocodes, as far as they concern the construction works themselves, have a direct relationship with the Interpretative Documents² referred to in Article 12 of the CPD, although they are of a different nature from harmonised product standards³. Therefore, technical aspects arising from the Eurocodes work need to be adequately considered by

² In accordance with Art. 3.3 of the CPD, the essential requirements (ERs) shall be given concrete form in interpretative documents for the creation of the necessary links between the essential requirements and the mandates for harmonised ENs and ETAGs/ETAs.

³ In accordance with Art. 12 of the CPD the interpretative documents shall:

- a) give concrete form to the essential requirements by harmonising the terminology and the technical bases and indicating classes or levels for each requirement where necessary ;
- b) indicate methods of correlating these classes or levels of requirement with the technical specifications, e.g. methods of calculation and of proof, technical rules for project design, etc.;
- c) serve as a reference for the establishment of harmonised standards and guidelines for European technical approvals.

The Eurocodes, de facto, play a similar role in the field of the ER 1 and a part of ER 2.