

ILNAS

Institut luxembourgeois de la normalisation
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des produits et services

ILNAS-EN 13369:2004

Common rules for precast concrete products

Règles communes pour les produits
préfabriqués en béton

Allgemeine Regeln für Betonfertigteile

07/2004



National Foreword

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Common rules for precast concrete products

Règles communes pour les produits préfabriqués en béton

Allgemeine Regeln für Betonfertigteile

This European Standard was approved by CEN on 19 March 2004.

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Foreword

This document (EN 13369:2004) has been prepared by Technical Committee CEN/TC 229 “Precast concrete products”, 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of an identical text or by endorsement, at the latest by January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

This document supersedes EN 13369:2001.

This document includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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.

Introduction

This European Standard is intended to outline the general common requirements applicable to a large variety of precast concrete products manufactured in a factory environment. It will act as a reference standard for other standards to enable a more consistent approach to standardisation in the field of precast concrete products and to reduce the variations brought about by a large number of standards being produced in parallel by different groups of experts. At the same time it allows those experts the flexibility to include variations in specific product standards where they are required.

This standard has been produced as part of the total CEN programme for construction and is in phase with associated standards EN 206-1 for concrete and EN 1992 for the design of concrete structures. As it is not a harmonized standard it may not be used in isolation for the purpose of CE marking of concrete products.

The design of structural products should be verified to ensure the fitness of their properties for the particular application, particular attention being paid to design co-ordination with other parts of the construction.

1 Scope

This European Standard specifies the terminology, requirements, basic performance criteria, test methods and evaluation of conformity that will be referred to by specific product standards unless they are not appropriate. It may also be used to specify products for which there is no standard. Not all of the requirements (clause 4) of this standard are relevant to all precast products.

If a specific precast concrete product standard exists it takes precedence over this standard.

The precast products dealt with in this standard are factory produced for building and civil engineering works. This standard may also be applied to products manufactured in temporary plants on site if the production is protected against adverse weather conditions and controlled following clause 6 provisions.

The analysis and design of precast concrete products is not within the scope of this standard but it does offer, for non seismic zones, information about:

- the choice of partial safety factors defined by the pertinent Eurocode;
- the definition of some requirements for prestressed concrete products.

This standard applies to compact concrete with no appreciable amount of entrapped air other than entrained air and with a dry density equal to or greater than 800 kg/m³. It does not cover prefabricated reinforced components of lightweight aggregate concrete with open structure.

2 Normative references

The following referenced documents are indispensable for the application 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.

2.1 General references

National documents take precedence until Eurocodes are published as European Standards.

EN 1990, *Eurocode - Basis of structural design*.

EN 1992-1-1:2004, *Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings*.

2.2 Concrete

EN 206-1:2000, *Concrete - Part 1: Specification, performance, production and conformity*.

EN 933-1, *Tests for geometrical properties of aggregates - Part 1: Determination of particle size distribution - Sieving method*.

EN 934-2, *Admixtures for concrete, mortar and grout - Part 2: Concrete admixtures - Definitions, requirements, conformity, marking and labelling*.

EN 1097-6, *Tests for mechanical and physical properties of aggregates - Part 6: Determination of particle density and water absorption*.

EN 12390-2, *Testing hardened concrete - Part 2: Making and curing specimens for strength tests*.

EN 12390-3, *Testing hardened concrete - Part 3: Compressive strength of test specimens*.

EN 12390-7, *Testing hardened concrete - Part 7: Density of hardened concrete*.

EN 12504-1, *Testing concrete in structures - Part 1: Cored specimens - Taking, examining and testing in compression.*

2.3 Steel

prEN 10080:1999, *Steel for the reinforcement of concrete - Weldable reinforcing steel - Part 1: General requirements.*

prEN 10138-1, *Prestressing steels - Part 1: General requirements.*

prEN 10138-2, *Prestressing steels - Part 2: Wire.*

prEN 10138-3, *Prestressing steels - Part 3: Strand.*

prEN 10138-4, *Prestressing steels - Part 4: Bars.*

2.4 Fire performance

EN 13501-1, *Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests.*

EN 1991-1-2, *Eurocode 1: Actions on structures - Part 1-2: General actions - Actions on structures exposed to fire.*

EN 1992-1-2, *Eurocode 2: Design of concrete structures - Part 1-2: General rules - Structural fire design.*

2.5 Acoustic insulation

EN ISO 140-3, *Acoustics - Measurement of sound insulation in buildings and of building elements - Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995).*

EN ISO 140-6, *Acoustics - Measurement of sound insulation in buildings and of building elements - Part 6: Laboratory measurements of impact sound insulation of floors (ISO 140-6:1998).*

EN ISO 717-1, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1:1996).*

EN ISO 717-2, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 2: Impact sound insulation (ISO 717-2:1996).*

2.6 Thermal resistance

EN ISO 10456:1999, *Building materials and products - Procedures for determining declared and design thermal values (ISO 10456:1999).*

3 Terms and definitions

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

3.1 General

3.1.1

concrete product

mass produced concrete unit manufactured in accordance with a product standard or this standard

NOTE Examples of concrete products are roof tiles, blocks, flags, garden furniture, etc., as opposed to precast products which normally will be structural units.