Guide to the use in the UK of DD ENV 206 : 1992 *Concrete. Performance, production, placing and compliance criteria*

Committees responsible for this British Standard

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Association of Lightweight Aggregate Manufacturers
Association of Metropolitan Authorities
British Aggregate Construction Materials Industries
British Cement Association
British Civil Engineering Test Equipment Manufacturers' Association
British Precast Concrete Federation
British Ready Mixed Concrete Association
Building Employers' Confederation
Cement Admixtures Association
Cementitious Slag Makers' Association
Concrete Society
County Surveyors' Society
Department of the Environment (Building Research Establishment)
Department of the Environment (Property Services Agency)
Department of Transport
Department of Transport (Transport Research Laboratory)
Electricity Industry in United Kingdom
Federation of Civil Engineering Contractors
Institute of Concrete Technology
Institution of Civil Engineers
Institution of Highways and Transportation
Institution of Structural Engineers
Institution of Water and Environmental Management
National House-Building Council
Quality Ash Association
Sand and Gravel Association
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Foreword

This Published Document has been prepared under the direction of Technical Committee B/517, Concrete. It provides advice on the use in the UK of the European Prestandard for concrete, ENV 206 published in the UK as DD ENV 206 : 1992. It contains guidance on areas where ENV 206 may be unclear or where its requirements may be unfamiliar to UK practitioners.

In the UK ENV 206 has the status of a Draft for Development; it is not to be regarded as a British Standard. Nevertheless, where Eurocode 2 : Part 1 *Design of concrete structures* (ENV 1992-1-1), also having only prestandard status and published as DD ENV 1992-1-1 : 1992, is used as the basis of design, then ENV 206 becomes obligatory as the reference document for concrete as a material and for its placing, compaction and curing. ENV 1992-1-1 also covers some aspects of execution, i.e. the act of constructing works, but these are not written in a form suitable for specification. When ENV 206 is upgraded to a full European Standard, EN 206, it will be published in the UK as BS EN 206 and conflicting British Standards will be withdrawn.

Work is continuing within CEN to develop various areas of ENV 206 into a more generally acceptable form before its transformation into a full European Standard. The UK is represented in the various Task Groups covering the subjects listed in ENV 206. Comments on ENV 206 and suggestions on how it might be improved are welcomed and should be sent to BSI as indicated in DD ENV 206.

In ENV 206 reference is made to EN(V) 197-1 and EN(V) 197-2 (June 1988 drafts), ISO/DP 9690, ISO/DIS 7031 and RILEM Recommendation CPC No. 7; as these documents are not readily available in the UK, they have been reproduced as annexes A, B, C, E and F of this guide. To avoid confusion between the clauses, tables, figures and footnotes in the annexes and those in this guide and in ENV 206, the clauses, tables, figures and footnotes in the annexes have been renumbered. Thus clause **1** of EN(V) 197-1 appears as **A.1**, and table 1 of EN(V) 197-2 appears as table B.1.

In this guide the clauses and references to tables are numbered to correspond with those in ENV 206.

Guide

1 General

1.2 Field of application

ENV 206 is intended to support the structural Eurocodes, in particular Eurocode 2 for concrete structures. However, it can also be used on its own or in conjunction with any other codes or regulations requiring the use of concrete although additional requirements may have to be specified. The national foreword to DD ENV 206 contains advice on its application.

Information on concrete with a closed structure is given in **5.2** of ENV 206. ENV 206 does not apply to materials such as no-fines concrete, foamed concrete or aerated concrete for which the relevant British Standards continue to apply.

The term 'simple structures' is not defined in ENV 206 but may be taken to include agricultural buildings and structures, which are covered by BS 5502, and certain low-rise buildings. For the latter, reference should be made to BS 8103, The Building Regulations Approved Document A[1], Building Standards (Scotland) Regulations [2] and Building Regulations (Northern Ireland) [3].

2 References

NOTE. The publications referred to in this guide are listed on page 53.

2.1 General

The terms 'obligatory', used in this subclause of ENV 206, and 'normative', used in **2.2** of ENV 206, may be taken as having the same meaning.

International standards describing methods of test for concrete have not been commonly used in the UK in the past although some Parts of BS 1881 are technically equivalent. National annex NA of DD ENV 206 : 1992 contains a list of the British Standards which may be used in place of those listed in **2.2** of ENV 206. The results obtained in accordance with these British Standards may be regarded as equivalent to those obtained in accordance with the corresponding international standards. Further information is given throughout this guide.

Where no equivalent British Standard is given then the publication referred to in ENV 206 has to be used.

Users of international standards may find that the reporting requirements are often significantly less than those required by an equivalent or similar British Standard. Practical tolerance levels, needed to enable the equipment used to carry out the test to be calibrated, are often not given in international standards.

Annex A of ENV 206 contains modifications to be made to ISO 1920, ISO 2736 : Part 2, ISO 4012, ISO 4013 and ISO 7031.

Agreement on equivalent or corresponding standards or rules, for use in place of the optional references, should normally be made between the affected parties prior to their use. Suggested equivalent or corresponding standards are covered by **2.3** of this guide.

2.2 Normative references

The corresponding British Standards listed in table I of this guide may be used instead of the international standards referred to in ENV 206. There are no British Standards corresponding to ISO 7031 or ISO 9690; further information on these standards is given in **7.3.1.5** and **6.2.1** of this guide.

2.3 Optional references

ENV 206 permits alternative equivalent standards or rules to be used instead of the optional references. Table II of this guide contains recommended alternative standards for use in the UK, together with information on how they differ from the international standards. Agreement on the use of equivalent standards should be obtained between all concerned parties before the contract is placed.

2.4 Other references

Eurocode 2 : Part 1 has been published by CEN as a European Prestandard, ENV 1992-1-1 : 1991, and is available from the British Standards Institution as DD ENV 1992-1-1 : 1992. At the time of preparation of this guide, Eurocode 4 was only available as a draft. The status of Eurocode 4 is not relevant in the context of ENV 206, however, as the only other reference to Eurocode 4 is in the introductory section on status of the document.