BRITISH STANDARD

BS EN
12715:2000

Execution of special geotechnical work — Grouting

The European Standard EN 12715:2000 has the status of a British Standard

ICS 93.020

National foreword

This British Standard is the official English language version of EN 12715:2000.

The UK participation in its preparation was entrusted by Technical Committee B/526, Geotechnics, to Subcommittee B/526/4, Strengthened reinforced soils and other fills, which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Find" facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 52, an inside back cover and a back cover.

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Exécution des travaux géotechniques spéciaux – Injection

Ausführung von besonderen geotechnischen Arbeiten (Spezialtiefbau) – Injektionen

This European Standard was approved by CEN on 9 June 2000.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 188, Execution of special geotechnical works, 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of an identical text or by endorsement, at the latest by January 2001, and conflicting national standards shall be withdrawn at the latest by January 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This standard has been prepared by the Working Group (WG 6) of the CEN/TC 288. The general remit of TC/288 is the standardization of the execution procedures for geotechnical works (including testing and control methods) and of the required material properties. WG 6 has been charged with the subject area of grouting, including compaction grouting.

The document has been prepared to stand alongside ENV 1997-1: EUROCODE 7: Geotechnics, Geotechnical Design, General Rules. This standard expands on design only where necessary, but provides full coverage of the construction and supervision requirements.

It has been drafted by a working group comprising delegates from 9 countries and against a background of more than ten pre-existing grouting standards and codes of practice, both national and international. In view of the different construction methods used internationally and the respective experience, it may be necessary to supplement this standard, or parts of it, by National Application Documents to cater for specific or local situations.

The annexes A, B and C are informative.

1 Scope

This standard is applicable to the execution, testing and monitoring of geotechnical grouting work. Specific aspects concerning design are provided since ENV 1997-4 has been abandoned.

Grouting for geotechnical purposes (geotechnical grouting) is a process in which the remote placement of a pumpable material in the ground is indirectly controlled by adjusting its rheological characteristics and by the manipulation of the placement parameters (pressure, volume and the flow rate).

The following principles and methods of geotechnical grouting are covered by this standard:

— displacement grouting (compaction grouting, hydraulic fracturing);

— grouting without displacement of the host material (permeation, fissure grouting, bulk filling).

Specialized grouting activities, generally associated with structural and/or emergency works, are not covered by this standard.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited in the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 196-1, *Methods of testing cement – Part 1: Determination of strength.*

EN 196-2, *Methods of testing cement – Part 2: Chemical analysis of cement.*

EN 196-3, *Methods of testing cement – Part 3: Determination of setting time and soundness.*

ENV 196-4, *Methods of testing cement – Part 4: Quantitative determination of constituents.*

EN 196-5, *Methods of testing cement – Part 5: Pozzdanicity test for pozzolanic cement.*

prEN 196-8:1997, *Methods of testing cement – Part 8: Determination of heat of hydration.*

prEN 196-9:1997, *Methods of testing cement – Part 9: Determination of heat of hydration – Semi-adiabatic method.*

prEN 197-1:2000, *Cement – Part 1: Composition, specifications and conformity criteria for common cements.*

prEN 197-2:2000, *Cement – Part 2: Conformity evaluation*.

ENV 451, *Methods of testing fly ash*.

EN 480-1, *Admixtures for concrete, mortar and grout – Test methods – Part 1: Reference concrete and reference mortar for testing*.

EN 480-2, *Admixtures for concrete, mortar and grout – Test methods – Part 2: Determination of setting time*.

prEN 480-3:1991, *Admixtures for concrete, mortar and grout – Test methods – Part 3: Determination of shrinkage and expansion*.

EN 480-4, *Admixtures for concrete, mortar and grout – Test methods – Part 4: Determination of bleeding of concrete*.