

Building lime —

Part 1: Definitions, specifications and conformity criteria

Cooperating organizations

The European Committee for Standardization (CEN), under whose supervision this European Prestandard was prepared, comprises the national standards organizations of the following countries:

Austria	Oesterreichisches Normungsinstitut
Belgium	Institut belge de normalisation
Denmark	Dansk Standard
Finland	Suomen Standardisoimisliitto, r.y.
France	Association française de normalisation
Germany	Deutsches Institut für Normung e.V.
Greece	Hellenic Organization for Standardization
Iceland	Technological Institute of Iceland
Ireland	National Standards Authority of Ireland
Italy	Ente Nazionale Italiano di Unificazione
Luxembourg	Inspection du Travail et des Mines
Netherlands	Nederlands Normalisatie-instituut
Norway	Norges Standardiseringsforbund
Portugal	Instituto Português da Qualidade
Spain	Asociación Española de Normalización y Certificación
Sweden	Standardiseringskommissionen i Sverige
Switzerland	Association suisse de normalisation
United Kingdom	British Standards Institution

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National foreword

This Draft for Development has been prepared under the direction of Technical Committee B/516, Cement and lime. It is the English language version of ENV 459-1:1994 *Building Lime — Part 1: Definitions, specifications and conformity criteria*, published by the European Committee for Standardization (CEN). It can be used as an alternative to BS 890 which remains valid.

It has been prepared by Technical Committee CEN/TC 51, Cement and building limes, as part of a package of standards, harmonized within the member countries of CEN, that deals with design and construction of masonry, including specifications for its constituent materials. The intention is that the complete European package will ultimately replace each country's national package of standards so that products can be traded freely.

EN 459-1 has the status of a prestandard because some of its technical requirements are only agreed provisionally. Further consideration will be given during the three year period of validity of the prestandard in order to refine these requirements so that it can be transformed into a European Standard. When EN 459-1 is available it will be published as BS EN 459-1 superseding BS 890 which will be withdrawn.

The specification DD ENV 459-1 and its associated test methods in BS EN 459-2 introduce significant changes in the manner in which building limes are tested and assessed in the UK. However, it is not anticipated that there will be any marked changes in the composition and quality of products already in common use.

The specification for building lime, BS 890, has been essentially unaltered since 1966. In the 1972 edition the imperial units were changed to metric and some appendices were deleted as their contents are to be found in BS 4551.

The test methods for lime in BS 6463-1, BS 6463-2, BS 6463-3 and BS 6463-4 were published between 1984 and 1987 and provided a revision of the test methods given in BS 890:1972. However, those methods were never formally incorporated into BS 890 because by 1988 CEN/TC 51 had set up Working Group 11 to produce a European specification and the supporting test methods. Some test methods described in BS 6463 are now superseded by those in BS EN 459-2 as explained in that standard.

DD ENV 459-1 covers a much wider range of types and compositions than is specified in BS 890. Table NA.1 of National annex NA (informative) compares the products in the two standards.

As the test methods in BS 890 and BS 6463 differ significantly from those in BS EN 459-2 it is not possible to compare directly the properties specified for lime in BS 890 and DD ENV 459-1. However, Table NA.2 of National annex NA gives values for properties specified in both standards: Table NA.3 gives values specified in only one of the standards and not in the other.

The following provisions included in DD ENV 459-1 were not given in BS 890.

- a) The term “air limes” is defined as “limes mainly consisting of calcium oxide or hydroxide which slowly harden in air by reacting with atmospheric carbon dioxide”. Such limes in UK terminology would be essentially non-hydraulic limes as they do not generally harden under water.
- b) Chemical requirements for hydrated limes are expressed in terms of quicklimes.
- c) Suppliers are required to make available on request typical values for the following:
 - 1) reactivity, $T_{\max}$ and t_u , of quicklime;
 - 2) water retention, of mortar;
 - 3) bulk density of dry powder.

d) Lime is to be marked on the bag, delivery note, invoice or other accompanying documentation with the following:

- 1) type of building lime;
- 2) form of building lime, e.g. quicklime, hydrated lime;
- 3) place of production;
- 4) working instructions if necessary;
- 5) gross mass (if supplied in bags);
- 6) safety information according to national regulations.

e) Lime is to be produced under an autocontrol system operated by the manufacturer to statistically based compliance criteria.

In the following instances, BS 890 includes provisions not appearing in ENV 459-1.

- 1) There is no requirement for the workability of lime putty. The value specified in BS 890 is given in National annex NB (informative).
- 2) There is no provision made for acceptance testing by the purchaser or for independent third party testing of samples taken from deliveries.
- 3) There is no requirement for the manufacturer to provide a certificate of conformity at the request of the purchaser.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature because it is considered that further experience is required in its application before it is converted into a British Standard. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained. Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion to a European Standard.

A review of this publication will be initiated by CEN two years after its publication by asking CEN members to submit national comments within the following six-month period so that a decision can be made on its status at the end of its three-year life. The commencement of this period for comment will be notified by an announcement in *BSI News*. According to the replies received, the responsible BSI committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it.

Comments should be sent in writing to the Secretary of BSI Technical Committee B/516 at 2 Park Street, London W1A 2BS, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the ENV title page, pages 2 to 18, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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Descriptors: Construction materials, lime, binders, materials, designation, classifications, definitions, marking, specifications, mechanical strength, composition, property, physical properties, conformity tests, defects

English version

Building lime — Part 1: Definitions, specifications and conformity criteria

Chaux de construction —
Partie 1: Définitions, spécifications et critères
de conformité

Baukalk — Teil 1: Definitionen,
Anforderungen und Konformitätskriterien

This European Prestandard (ENV) was approved by CEN on 1993-11-10 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard (EN).

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Prestandard has been prepared by the Technical Committee CEN/TC 51, Cement and Building limes, the secretariat of which is held by IBN.

The European Standard EN 459 for building lime consists of the following parts:

— *Part 1: Definitions, specifications and conformity criteria;*

— *Part 2: Test methods.*

The requirements in ENV 459-1 are based on the results of tests on building lime according to EN 459-2.

According to the CEN/CENELEC Internal Regulations the following countries are bound to announce this European Prestandard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

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