



SLOVENSKI STANDARD
SIST EN 998-1:2004

01-januar-2004

BUXca Yý U
PSIST prEN 998-1:1996

Specifikacija malt za zidanje – 1. del: Zunanji in notranji omet

Specification for mortar for masonry - Part 1: Rendering and plastering mortar

Festlegungen für Mörtel im Mauerwerksbau - Teil 1: Putzmörtel

iTeh STANDARD PREVIEW
Définitions et spécifications des mortiers pour maçonnerie - Partie 1 : Mortiers d'enduits minéraux extérieurs et intérieurs
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN 998-1:2003
SIST EN 998-1:2004
http://www.sist.si/log/standards/998-1-2003-889-4ca8-8e9e-ea7cd0beffeb/sist-en-998-1-2004

ICS:

91.100.10 Cement. Mavec. Apno. Malta Cement. Gypsum. Lime.
Mortar

SIST EN 998-1:2004

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 998-1:2004

<https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-ea7cd0beffeb/sist-en-998-1-2004>

ICS 91.100.10

English version

Specification for mortar for masonry - Part 1: Rendering and plastering mortar

Spécifications des mortiers pour maçonnerie - Partie 1:
Mortiers d'enduits intérieurs et extérieurs

Festlegungen für Mörtel im Mauerwerksbau - Teil 1:
Putzmörtel

This European Standard was approved by CEN on 2 October 2002.

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 Management Centre 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 Management Centre has the same status as the official versions.

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

iTeh STANDARD PREVIEW
(standards info)

SIST EN 998-1:2004
<https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-ea7cd0beffeb/sist-en-998-1-2004>



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms, definitions and abbreviations	6
4 Materials	8
5 Requirements	8
5.1 General	8
5.2 Properties of hardened mortars	9
5.3 Properties of fresh mortars	13
5.4 Mixing of mortar on site	13
6 Designation of rendering and plastering mortars	13
7 Marking and labelling	13
8 Evaluation of conformity	14
8.1 General	14
8.2 Initial type tests	14
8.3 Factory Production Control	14
Annex A (normative) Sampling for initial type testing and independent testing of consignments	16
Annex ZA (informative) Clauses of this European Standard addressing the provisions of EU Construction Products Directive	17

PDF STANDARD PREVIEW
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/29b1bde6-8889-4ca8-8e9e-ea7cd0befeb/sist-en-998-1-2004>

Foreword

This document (EN 998-1:2003) has been prepared by Technical Committee CEN/TC 125 "Masonry", the Secretariat of which is held by BSI, following initial preparation by Working Group 2.

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 October 2003, and conflicting national standards shall be withdrawn at the latest by January 2005.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports the essential requirements of the EU Construction Products Directive (89/106/EEC).

For relationship with EU Directives, see informative Annex ZA which is an integral part of this standard.

In this European Standard Annex A is normative.

EN 998 *Specification for mortar for masonry* consists of:

— *Part 1: Rendering and plastering mortar.*

— *Part 2: Masonry mortar.*

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The properties of rendering and plastering mortars depend essentially on the type or types of binders used and their respective proportions. Special properties can be achieved by the type of aggregates, admixtures and/or additions used.

Rendering/plastering mortars are defined

- according to the concept as either:
 - designed mortars; or
 - prescribed mortars.
- according to the mode of manufacture as either:
 - factory-made mortars;
 - semi-finished factory mortars; or
 - site-made mortars.
- according to the properties and/or use, as either:
 - general purpose rendering/plastering mortar;
SIST EN 998-1:2004
<https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-7e40b75b/sist-en-998-1-2004>
 - lightweight rendering/plastering mortar;
 - coloured rendering mortar;
 - one-coat rendering mortar;
 - renovation rendering/plastering mortar;
 - thermal rendering/plastering insulating mortar.

Rendering/plastering mortars do not attain their final characteristics until properly hardened after application. The functions performed by a rendering/plastering mortar depend on the properties of the type of materials used, on the thickness of the coats and the type of application. In addition, rendering/plastering mortars determine the surface of the construction.

Regional differences in construction practices and climate, and different constituents for rendering/plastering mortars do not allow for the establishment of standard mix proportions for prescribed mortar that would be applicable in all of Europe. Therefore the specification of such mix proportions (recipes) and fields of application should be based on practice and experience available in the place of use.

1 Scope

This European Standard is applicable to factory made rendering/plastering mortar based on inorganic binders for external (rendering) and internal (plastering) use on walls, ceilings, columns and partitions. It contains definitions and final performance requirements.

It does not cover mortars where calcium sulphate binder is the principle active binding agent.

Calcium sulphate binder can be used as an additional binder together with air lime. If air lime is the principle active binding component, the rendering/plastering mortar is covered by this standard. If the calcium sulphate binder is the principle active binding component, the mortar is covered by EN 13279. The classification is carried out by the producer of the mortar.

Special fire resistant- and acoustical mortars, mortars for structural repair and surface treatments of building elements such as materials for smoothing or trueing, paints, coatings, thin-layer organic renders/plasters and prefabricated units (e.g. plaster boards) are not dealt with in this standard.

This standard covers rendering/plastering mortars defined in clause 3 with the exception of site made rendering/plastering mortars. However, this standard or part of this standard may be used in conjunction with codes of application and national specifications covering site made mortars.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at 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 (including amendments).

[SIST EN 998-1:2004](https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-770171170981/en-998-1-2003)

[https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-](https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-770171170981/en-1015-2)

EN 1015-2, *Methods of test for mortar for masonry — Part 2: Bulk sampling of mortars and preparation of test mortars.*

EN 1015-7, *Methods of test for mortar for masonry — Part 7: Determination of air content of fresh mortar.*

EN 1015-9, *Methods of test for mortar for masonry — Part 9: Determination of workable life and correction time of fresh mortar.*

EN 1015-10, *Methods of test for mortar for masonry — Part 10: Determination of dry bulk density of hardened mortar.*

EN 1015-11, *Methods of test for mortar for masonry — Part 11: Determination of flexural and compressive strength of hardened mortar.*

EN 1015-12, *Methods of test for mortar for masonry — Part 12: Determination of adhesive strength of hardened rendering and plastering mortar on substrates.*

EN 1015-18, *Methods of test for mortar for masonry — Part 18: Determination of water absorption coefficient due to capillary action of hardened mortar.*

EN 1015-19, *Methods of test for mortar for masonry — Part 19: Determination of water vapour permeability of hardened rendering and plastering mortar.*

EN 1015-21, *Methods of test for mortar for masonry — Part 21: Determination of the compatibility of one-coat rendering mortars with substrates.*

EN 1745:2002, *Masonry and masonry products — Methods for determining design thermal values.*

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

3 Terms, definitions and abbreviated terms

For the purposes of this European Standard the following terms, definitions and abbreviated terms apply.

3.1

rendering/plastering mortar

mix of one or more inorganic binders, aggregates, water and sometimes admixtures and/or additions, used as external renders or internal plasters

3.2

fresh rendering/plastering mortar

mortar completely mixed and ready for use

3.3 Types of rendering/plastering mortar defined according to concept

3.3.1

designed rendering/plastering mortar

mortar whose composition and manufacturing method is chosen by the producer in order to achieve specified properties (performance concept)

3.3.2

prescribed rendering/plastering mortar

mortar made in pre-determined proportions, the properties of which are assumed from the stated proportion of the constituents (recipe concept)

3.4 Types of rendering/plastering mortar according to the mode of manufacture

3.4.1

factory-made rendering/plastering mortar

mortar batched and mixed in a factory. It may be 'dry mortar' which is ready mixed only requiring the addition of water, or 'wet mortar' which is supplied ready for use

3.4.2 semi-finished rendering/plastering factory mortar:

3.4.2.1

prebatched rendering/plastering mortar

mortar whose constituents are wholly batched in a factory, supplied to the building site and mixed there according to the manufacturer's specification and conditions

3.4.2.2

premixed lime-sand rendering/plastering mortar

mortar whose constituents are wholly batched and mixed in a plant, supplied to the building site where further constituents specified or provided by the factory are added (e.g. cement)

3.4.3

site-made rendering/plastering mortar

mortar composed of individual constituents batched and mixed on the building site

3.5 Types of rendering/plastering mortar according to properties and/or use

3.5.1**general purpose rendering/plastering mortar**

rendering/plastering mortar without special characteristics. It can be prescribed or designed

3.5.2**lightweight rendering/plastering mortar**

designed rendering/plastering mortar with a dry hardened density below a prescribed figure (see Table 2, L1)

3.5.3**coloured rendering mortar**

designed rendering/plastering mortar specially coloured

NOTE The colour is achieved e.g. with pigments or coloured aggregates.

3.5.4**one coat rendering mortar for external use**

designed rendering mortar applied in one coat which fulfils all the functions of a multicoat system used externally and which is usually specifically coloured. One coat mortars for external use may be manufactured using normal and/or lightweight aggregates

3.5.5**renovation mortar**

designed rendering/plastering mortar used on moist masonry walls containing water soluble salts. These mortars have a high porosity and vapour permeability and reduced capillary action

3.5.6**thermal insulating mortar**

designed mortar with specific insulating properties

iTeh STANDARD PREVIEW

(standards.iteh.ai)

3.6 Further definitions

[SIST EN 998-1:2004](https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-ea7cd0befe8b/sist-en-998-1-2004)

<https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-ea7cd0befe8b/sist-en-998-1-2004>

3.6.1**declared value**

value that a manufacturer is confident in achieving, bearing in mind the precision of test and variability of process

3.6.2**render/plaster**

materials used externally are referred to as render/rendering and materials used internally as plaster/plastering

3.6.3**rendering/plastering system**

sequence of coats to be applied to a background which can be used in conjunction with the possible use of a support and/or reinforcement and/or a pre-treatment

NOTE In some cases the pre-treatment may be regarded as a separate coat in addition to the specified system.

3.6.4**render/plaster coat**

layer applied in one or more operations or passes with the same mix, with the previous pass not being allowed to set before the next one is made (i.e. fresh on fresh)

3.6.5**undercoat**

lower coat or coats of a system

3.6.6

final coat

last coat, decorative or not, of a multicoat rendering or plastering system

3.7 Abbreviated terms

GP: General purpose rendering/plastering mortar

LW: Lightweight rendering/plastering mortar

CR: Coloured rendering mortar

OC: One coat rendering mortar for external use

R: Renovation mortar

T: Thermal insulating mortar

FP: Fracture pattern

4 Materials

Raw materials shall have characteristics permitting the finished product to conform with the requirements of this standard. The manufacturer shall keep records of how suitability of materials is established.

ITeH STANDARD PREVIEW
(standards.iteh.ai)

5 Requirements

[SIST EN 998-1:2004](https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-ea7cd0bef7eb/sist-en-998-1-2004)

5.1 General

<https://standards.iteh.ai/catalog/standards/sist/29bbdeca-8889-4ca8-8e9e-ea7cd0bef7eb/sist-en-998-1-2004>

The requirements and properties for hardened and fresh mortar specified in this standard shall be defined in terms of the test methods and procedures referred to in this standard. For these tests, the mortar shall be sampled in accordance with EN 1015-2.

The conformity criteria given in Table 2 for hardened mortar and 5.3 for fresh mortar relate to initial type tests (see 8.2) and consignment testing (see Annex A). For production evaluation purposes the conformity criteria shall be defined in the factory production control documentation (see 8.3).

NOTE The mortar properties obtained under laboratory conditions cannot always be directly comparable with the mortar properties obtained under site conditions.

5.2 Properties of hardened mortars

5.2.1 General

Different fields of use and exposure conditions require mortars with different properties and performance levels. For this purpose, compressive strength, water absorption and thermal conductivity shall be classified according to Table 1. The properties relevant to the intended use and/or type of product shall be declared according to Table 2. The declared values and/or classes shall meet the requirements specified in Table 2 .

When relevant for the use for which the rendering/plastering mortar is placed on the market, additional properties to those specified in Table 2 may be declared for each type of mortar where a dash indicates 'no requirement'.

The declaration for reaction to fire and durability of mortars shall be made in accordance with the following provisions:

5.2.2 Reaction to fire

Rendering/plastering mortars containing a mass or volume fraction of $\leq 1,0$ % (whichever is the most onerous) of homogeneously distributed organic materials are classified as reaction to fire Class A1 without the need to test.

Rendering/plastering mortars containing a mass or volume fraction of $> 1,0$ % (whichever is the most onerous) of homogeneously distributed organic materials shall be classified in accordance with EN 13501-1 and the appropriate reaction to fire class declared.

NOTE Attention is drawn to the Commission Decision 96/603/EC, as amended, in which non-combustible mortar containing not more than a mass or volume fraction of 1,0 % (whichever is the more onerous) of homogeneously distributed organic materials are classified as reaction to fire Class A 1 without testing.

5.2.3 Durability

5.2.3.1 One-coat rendering mortar

The durability against freeze/thaw of one-coat rendering mortar shall be assessed by testing adhesion and water permeability after weathering cycles (see Table 2, L4 and L7).

5.2.3.2 All rendering mortars except one-coat

Until a European method of test is available, the freeze-thaw resistance shall be evaluated and declared to the provisions valid in the intended place of use of the mortar.