



# SLOVENSKI STANDARD

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### Specifikacija za malte 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

Définitions et spécifications des mortiers pour maçonnerie - Partie 1: Mortiers d'enduits minéraux extérieurs et intérieurs

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#### **ICS:**

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

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EUROPEAN STANDARD

EN 998-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2016

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Supersedes EN 998-1:2010

English Version

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

Définitions et spécifications des mortiers pour  
maçonnerie - Partie 1: Mortiers d'enduits minéraux  
extérieurs et intérieurs

Festlegungen für Mörtel im Mauerwerksbau - Teil 1:  
Putzmörtel

This European Standard was approved by CEN on 9 April 2016.

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

European foreword.....	4
Introduction .....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions and abbreviated terms .....	7
3.1 Terms and definitions .....	7
3.2 Abbreviated terms .....	9
4 Materials.....	10
5 Product characteristics.....	10
5.1 General.....	10
5.2 Characteristics of fresh mortar .....	10
5.2.1 Workable life .....	10
5.2.2 Air content.....	10
5.3 Characteristics of hardened mortar .....	10
5.3.1 General.....	10
5.3.2 Durability .....	11
5.3.3 Reaction to fire.....	11
5.3.4 Dangerous substances.....	11
5.4 Mixing of mortar on site .....	14
6 Designation of rendering and plastering mortars.....	14
7 Marking and labelling.....	14
8 Assessment and verification of constancy of performance (AVCP) .....	14
8.1 General.....	14
8.2 Product-type determination .....	14
8.2.1 General.....	14
8.2.2 Sampling.....	15
8.2.3 Reference test.....	15
8.2.4 Repeating of product-type determination .....	15
8.2.5 Recording.....	15
8.2.6 Application of test methods.....	15
8.3 Factory Production Control, FPC .....	15
8.3.1 General.....	15
8.3.2 Process control.....	15
8.3.3 Finished product conformity .....	16
8.3.4 Statistical techniques.....	16
8.3.5 Traceability – marking and stock control of products .....	16
8.3.6 Non-conforming products.....	17
Annex A (normative) Sampling for product-type determination and independent testing of consignments.....	18
A.1 General.....	18
A.2 Sampling procedure.....	18

<b>Annex B (informative) Indicative test frequencies for Factory Production Control (FPC).....</b>	<b>19</b>
<b>Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No.305/2011 .....</b>	<b>21</b>
<b>ZA.1 Scope and relevant characteristics .....</b>	<b>21</b>
<b>ZA.2 System of Assessment and Verification of Constancy of Performance (AVCP) .....</b>	<b>23</b>
<b>ZA.3 Assignment of AVCP tasks .....</b>	<b>23</b>
<b>Bibliography .....</b>	<b>25</b>

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**EN 998-1:2016 (E)****European foreword**

This document (EN 998-1:2016) has been prepared by Technical Committee CEN/TC 125 “Masonry”, the secretariat of which is held by BSI.

This document supersedes EN 998-1:2010.

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 May 2017, and conflicting national standards shall be withdrawn at the latest by August 2018.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports basic requirements for construction works of the EU Construction Products Regulation (Regulation (EU) No 305/2011).

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

The most significant changes compared to the previous edition include:

- a) implementation of new regulatory (CPR) terminology where relevant;
- b) the order of 5.2 to 5.4 has been changed (fresh mortar before hardened mortar);
- c) revised clauses on Assessment and verification of constancy of performance (AVCP);
- d) new annex with indicative frequencies on testing for factory production control (informative);
- e) revised Annex ZA (informative);
- f) some minor editorial changes.

No changes to existing technical classes and/or threshold levels have been made.

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

- *Part 1: Rendering and plastering mortar*
- *Part 2: Masonry mortar*

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

The characteristics 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:

- a) according to the concept as either:
  - 1) designed mortar; or
  - 2) prescribed mortar.
- b) according to the mode of manufacture as either:
  - 1) factory-made mortar;
  - 2) semi-finished factory mortar; or
  - 3) site-made mortar.
- c) according to the properties and/or use, as either:
  - 1) general purpose rendering/plastering mortars;
  - 2) lightweight rendering/plastering mortars;
  - 3) coloured rendering mortar; [SIST EN 998-1:2017](https://standards.iteh.ai/catalog/standards/sist/ea3362c2-0397-4ef9-ab5a-689ad34f1665/sist-en-998-1-2017)
  - 4) one-coat rendering mortar; <https://standards.iteh.ai/catalog/standards/sist/ea3362c2-0397-4ef9-ab5a-689ad34f1665/sist-en-998-1-2017>
  - 5) renovation rendering/plastering mortars;
  - 6) thermal rendering/plastering insulating mortars.

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 characteristics of the types of material 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.

**EN 998-1:2016 (E)****1 Scope**

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

This European Standard provides for the assessment and verification of constancy of performance (AVCP) of the product to this European Standard. The marking requirement for products covered by this European Standard is included.

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

Calcium sulphate binder can be used as an additional binder together with air lime. If air lime is the principal active binding component, the rendering/plastering mortar is covered by this European Standard. If the calcium sulphate binder is the principal active binding component, the mortar is covered by EN 13279.

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. plasterboards) are not dealt with in this European Standard.

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

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**2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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 of mortar for masonry - Part 12: Determination of adhesive strength of hardened rendering and plastering mortars 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 mortars*



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

EN 1745:2012, *Masonry and masonry products - Methods for determining thermal properties*

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

#### 3.1 Terms and definitions

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

##### 3.1.1

##### **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

##### 3.1.2

##### **fresh rendering/plastering mortar**

mortar completely mixed and ready for use

##### 3.1.3

##### **Types of rendering/plastering mortar defined according to concept**

##### 3.1.3.1

##### **designed rendering/plastering mortar**

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

##### 3.1.3.2

##### **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)

##### 3.1.4

##### **Types of rendering/plastering mortar according to the mode of manufacture**

##### 3.1.4.1

##### **factory-made rendering/plastering mortar**

mortar batched and mixed in a factory

Note 1 to entry: It can be 'dry mortar', which is ready mixed only requiring the addition of water, or 'wet mortar', which is supplied ready for use.

##### 3.1.4.2

##### **Semi-finished rendering/plastering factory mortar**

##### 3.1.4.2.1

##### **pre-batched 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

## EN 998-1:2016 (E)

## 3.1.4.2.2

**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)

## 3.1.4.3

**site-made rendering/plastering mortar**

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

## 3.1.5

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

## 3.1.5.1

**general purpose rendering/plastering mortar**

rendering/plastering mortar without special characteristics

Note 1 to entry: It can be prescribed or designed.

## 3.1.5.2

**lightweight rendering/plastering mortar**

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

## 3.1.5.3

**coloured rendering/plastering mortar**

designed rendering/plastering mortar specially coloured

Note 1 to entry: The colour is achieved, e.g. with pigments or coloured aggregates.

## 3.1.5.4

**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

Note 1 to entry: One-coat mortars for external use can be manufactured using normal and/or lightweight aggregates.

## 3.1.5.5

**renovation mortar**

designed rendering/plastering mortar used on moist masonry walls containing water soluble salts

Note 1 to entry: These mortars have a high porosity and vapour permeability and reduced capillary action.

## 3.1.5.6

**thermal insulating mortar**

designed mortar with specific insulating properties

## 3.1.6

**Further definitions**

## 3.1.6.1

**declared value**

value that a manufacturer is confident in achieving, taking into account the precision of test method, the variability of the production process(es) and the product performance

**3.1.6.2****render/plaster**

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

**3.1.6.3****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 1 to entry: In some cases, the pre-treatment can be regarded as a separate coat in addition to the specified system.

**3.1.6.4****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)

**3.1.6.5****undercoat**

lower coat or coats of a system

**3.1.6.6****final coat**

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

**3.1.6.7****product-type**

set of representative performance levels or classes of a construction product, in relation to its essential characteristics, produced using a given combination of raw materials or other elements in a specific production process

Note 1 to entry: The definition is taken from Regulation (EU) No. 305/2011.

**3.2 Abbreviated terms**

For the purposes of this document, the following abbreviated terms apply.

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