



SLOVENSKI STANDARD

SIST EN 15651-3:2017

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Nadomešča:
SIST EN 15651-3:2013

**Tesnilne mase za nekonstrukcijske stike v stavbah in na površinah za pešce - 3.
del: Tesnilne mase za stike v sanitarijah**

Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 3:
Sealants for sanitary joints

Fugendichtstoffe für nicht tragende Anwendungen in Gebäuden und Fußgängerwegen -
Teil 3: Dichtstoffe für Fugen im Sanitärbereich

Mastics pour joints pour des usages non structuraux dans les constructions immobilières
et pour chemins piétonniers - Partie 3: Mastics sanitaires

Ta slovenski standard je istoveten z: EN 15651-3:2017

ICS:

91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials
91.140.70	Sanitarne naprave	Sanitary installations

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EUROPEAN STANDARD

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English Version

Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 3: Sealants for sanitary joints

Mastics pour joints pour des usages non structuraux dans les constructions immobilières et pour chemins piétonniers - Partie 3 : Mastics sanitaires

Fugendichtstoffe für nicht tragende Anwendungen in Gebäuden und Fußgängerwegen - Teil 3: Dichtstoffe für Fugen im Sanitärbereich

This European Standard was approved by CEN on 25 December 2016.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 15651-3:2017) has been prepared by Technical Committee CEN/TC 349 “Sealants for joints in building construction”, the secretariat of which is held by AFNOR.

This document supersedes EN 15651-3:2012.

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 August 2017, and conflicting national standards shall be withdrawn at the latest by November 2018.

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.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports basic work requirements of EU Regulation.

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

This document is one of the product European Standards within the framework series of EN 15651 on *Sealants for non-structural use in joints in buildings and pedestrian walkways*, as follows:

- *Part 1: Sealants for facade elements*,
- *Part 2: Sealants for glazing*,
- *Part 3: Sealants for sanitary joints* (this document),
- *Part 4: Sealants for pedestrian walkways*,
- *Part 5: Assessment and verification of constancy of performance, marking and labelling*.

The following significant technical changes have been implemented in this new edition:

- Clause 4.1.3 and Clause 5 have been improved;
- Clause 4.5 has been modified;
- Clause 7 and Annex ZA have been changed in accordance with the regulation (EU) No.305/2011.

According to the CEN/CENELEC Internal Regulations, the national standards organizations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 15651-3:2017 (E)**1 Scope**

This European Standard specifies definitions and requirements for sealants used for sealing of joints applied in sanitary areas in the interior of buildings exposed to non-pressurized water.

It covers joints in:

- bathrooms;
- toilets;
- showers;
- domestic kitchens;
- prefabricated elements in sanitary areas (e.g. shower cubicles).

Industrial, drinking water, underwater (swimming pools, sewage systems, etc.), food contact applications and sealing of glass-ceramic cooktop panels (stove tops, ceramic hobs) are excluded from the scope.

This European Standard does not provide criteria or recommendations for the design of joints and installation of sealants in sanitary applications.

NOTE Provisions on assessment and verification of constancy of performance - AVCP (i.e. Product type determination and Factory Production Control) and marking of these products are given in EN 15651-5.

This European Standard does not apply to non-structural sealants in any of non-paste form, to those used in sanitary joints and to oil-based mastics.

2 Normative references

[SIST EN 15651-3:2017](https://standards.iteh.ai/catalog/standards/sist/cfad42fa-7aa7-490a-866d-5ad8b3b68791/sist-en-15651-3-2017)

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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 13238, *Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates*

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

EN 15651-5:2017, *Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 5: Evaluation of conformity and marking*

EN ISO 846:1997, *Plastics - Evaluation of the action of microorganisms (ISO 846:1997)*

EN ISO 868, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

EN ISO 2811-1:2016, *Paints and varnishes - Determination of density - Part 1: Pycnometer method (ISO 2811-1:2016)*

EN ISO 6927, *Buildings and civil engineering works - Sealants - Vocabulary (ISO 6927)*

EN ISO 7390, *Building construction - Jointing products - Determination of resistance to flow of sealants (ISO 7390)*

EN ISO 8340, *Building construction - Sealants - Determination of tensile properties at maintained extension (ISO 8340)*

EN ISO 9047, *Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants at variable temperatures (ISO 9047)*

EN ISO 10563, *Building construction - Sealants - Determination of change in mass and volume (ISO 10563)*

EN ISO 10590, *Building construction - Sealants - Determination of tensile properties of sealants at maintained extension after immersion in water (ISO 10590)*

EN ISO 10591, *Building construction - Sealants - Determination of adhesion/cohesion properties of sealants after immersion in water (ISO 10591)*

EN ISO 11358 (all parts), *Plastics — Thermogravimetry (TG) of polymers — General principles (ISO 11358)*

EN ISO 11600:2003, *Building construction - Jointing products - Classification and requirements for sealants (ISO 11600:2002)*

EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*

ISO 13640, *Building construction — Jointing products — Specifications for test substrates*

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3 Terms and definitions

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For the purposes of this document, the terms and definitions given in EN ISO 6927 and the following apply.

3.1

non-reactive sealant

mainly physical drying mechanism, without significant change in the molecular weight of the main polymer

3.2

reactive sealant

mainly curing by chemical reaction, with significant increase of the molecular weight of the main polymer

3.3

cure

irreversible transformation of a sealant from a liquid or paste-like state into a hardened or rubber-like solid state

3.4

uncured / wet

state of a sealant prior to the above transformation

4 Requirements

4.1 Identification requirements and test methods

4.1.1 Short description of the sealant

The short description of the non-structural sealant for sanitary joints includes: brand name, type (general chemical family), opaque or translucent, waterborne or solvent based or solvent free, reactive or non-reactive, and one or multi-component (e.g. waterborne acrylic opaque and one component, etc.).

The primer shall be stated for the substrate concerned, if relevant (name, chemical type, etc.).

4.1.2 Thermogravimetric test

The test shall be carried out in accordance with EN ISO 11358 on the uncured or wet sealant, between 35 °C and 900 °C, temperature slope 10 °C/min, non-oxidative condition (e.g. nitrogen). A single sample shall be used for this test. A single specimen may be tested and there shall be no significant difference between the reference curve and derivative (profile).

In the case of a multi-component sealant, each component shall be evaluated (if relevant).

4.1.3 Density

4.1.3.1 Principal

A pycnometer is filled with the product under test. The density is calculated from the mass of the product in the pycnometer and the known volume of the pycnometer.

4.1.3.2 Method

A test temperature of $(23,0 \pm 0,5)$ °C shall be used and the test sample and pycnometer shall be conditioned to this temperature, and it shall be ensured that the temperature variation does not exceed 0,5 °C during testing.

The determination of the density shall be in accordance with EN ISO 2811-1:2016 using a suitable 50 cm³ calibrated pycnometer as described in EN ISO 2811-1:2016, 6.1.1. An alternative is the 50 cm³ Hubbard pycnometer as described in ISO 3507.

Measurements should be carried out on the uncured or wet sealant and in the case of a multi-component sealant, each component shall be evaluated. At least three samples shall be tested. The specific pycnometer used and the mean value, recorded to two decimal places, shall be declared. The tolerance of the declared values shall be within ± 5 %.

4.1.4 Indentation hardness (Shore hardness)

The determination of the indentation hardness shall be in accordance with EN ISO 868. The test shall be performed on the cured or dried sealant.

The exact conditions of the test shall be defined by the manufacturer, i.e. thickness, cure/drying times and temperature and relative humidity, specific Shore type (A, D...), test time, temperature, etc.

At least three samples shall be tested and five measurements taken per sample. The mean value and tolerances of all measurements, recorded to the nearest unit, shall be declared.

4.2 Conditioning, test procedure and substrates

When determining the classification of a sanitary sealant according to the requirements of this standard, the same conditioning procedure shall be used in all the relevant test methods (Method A or Method B conditioning shall be used for all relevant tests).

For each test method, three test specimens for each substrate shall be tested. The same batch of sealant (and primer, if used) shall be used in all tests. The same substrates (material and surface finish) shall be used in all tests.

Substrates to be used in all mechanical tests concerned shall be glass and/or anodised aluminium according to ISO 13640 and/or any substrate used in the sanitary area.

The specific test conditions shall be in accordance with Table 1.

Table 1 – Specific test conditions

	Test method	Class XS
Elongation ^a	EN ISO 8340 (Test temperature: (23 ± 2) °C) EN ISO 10590	60 % 60 %
Amplitude	EN ISO 9047 (Test temperature: (70 ± 2) °C and optionally (- 20 ± 2) °C or (0 ± 2) °C)	±20 %
^a The value of elongation is given as a percentage of the original width: $\text{elongation \%} = \frac{[(\text{final width} - \text{original width}) / (\text{original width})] \times 100}{100} \%$		

4.3 Performance requirements and test methods for non-structural sealants for sanitary joints

4.3.1 General

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Classes of non-structural sealants to be used for sanitary elements are referred to as type "S". A summary of the characteristics and classes, together with corresponding test methods for these characteristics shall be as given in Table 2.