



**SLOVENSKI STANDARD**  
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**Karakterizacija enokomponentnih pen (OCF) - 5. del: Izolacija**

Characterization of One Component Foam (OCF) - Part 5: Insulation

Charakterisierung von Einkomponentenschäumen - Teil 5: Dämmung

Caractérisation des mousses monocomposants - Partie 5 : Isolation

**Ta slovenski standard je istoveten z: prEN 17333-5**

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## Characterization of One Component Foam (OCF) - Part 5: Insulation

Charakterisierung von Einkomponentenschäumen  
(OCF) - Teil 5: Dämmung

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 193.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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<b>Contents</b>		Page
<b>European foreword</b> .....		<b>3</b>
<b>1</b>	<b>Scope</b> .....	<b>4</b>
<b>2</b>	<b>Normative references</b> .....	<b>4</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>4</b>
<b>4</b>	<b>Test method</b> .....	<b>4</b>
<b>4.1</b>	<b>Principle</b> .....	<b>4</b>
<b>4.2</b>	<b>Equipment</b> .....	<b>5</b>
<b>4.3</b>	<b>Sampling</b> .....	<b>5</b>
<b>4.3.1</b>	<b>Conditioning</b> .....	<b>5</b>
<b>4.3.2</b>	<b>Test pieces preparation</b> .....	<b>5</b>
<b>4.4</b>	<b>Test procedure</b> .....	<b>6</b>
<b>4.5</b>	<b>Expression of results</b> .....	<b>7</b>
<b>4.6</b>	<b>Test report</b> .....	<b>7</b>
<b>Bibliography</b> .....		<b>8</b>

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## European foreword

This document (prEN 17333-5:2018) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by UNE.

This document is currently submitted to the CEN Enquiry.

This document is one of the product European Standards within the framework series of EN 17333 on Characterization of *One Component Foam (OCF)*, as follows:

- *Part 1: Yield*
- *Part 2: Expansion*
- *Part 3: Application*
- *Part 4: Mechanical Strength*
- *Part 5: Insulation* (this document)

This document is one of a series of standards which specify test methods for determining the properties of one component foams (OCFs).

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## prEN 17333-5:2018 (E)

### 1 Scope

This document specifies test methods for the evaluation of the insulation properties for moisture curing, self-curing or water drying foams dispensed from single pressurized containers used as an insulating air sealant and adhesive for both building and non-building applications.

This document does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.

The following test method is described:

- Thermal conductivity: This method describes how to determine the long term thermal conductivity of a cured OCF foam, dispensed from a pressurized can, with a sample subjected to accelerated ageing procedure.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 923, *Adhesives - Terms and definitions*

EN 12667, *Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### one component foam

##### OCF

moisture curing or water drying foam as well as self-curing activatable foam dispensed from single pressurized containers

### 4 Test method

#### 4.1 Principle

The test specimen is prepared by foaming into a mould made of two plates and spacers of non-adherent material. After curing, the two sides of the mould are open and the foam sample removed. The sample is then cut into the desired dimensions, depending on the measuring device to be used, of e.g. 300 mm × 300 mm or 200 mm × 200 mm. The test is carried out on the basis of EN 12667 with a mean temperature of 10 °C.

## 4.2 Equipment

**4.2.1 2 plates** (not water absorbing, not adherent) dimensions of 400 mm × 400 mm × 10 mm.

**4.2.2 2 spacers** not water absorbing, not adherent, (e.g. PE, PTFE, on which polyurethane does not adhere), with dimensions of 400 mm × 30 mm × 10 mm.

**4.2.3 4 clamps.**

**4.2.4 Water atomizer.**

**4.2.5 Knife.**

**4.2.6 Balance** with accuracy of 0,1 g.

**4.2.7 Thermal Conductivity Meter.**

## 4.3 Sampling

### 4.3.1 Conditioning

Bring the plates, the spacers and the container to the test temperature ( $23 \pm 2$ ) °C and ( $50 \pm 5$ ) % RH for at least 24 h.

### 4.3.2 Test pieces preparation

Prepare the mould by placing the spacers between the plates and tighten it with the clamps.

Shake an unused foam container vigorously 20 times.

Extrude the foam in multiple layers between the plates, until the foam fills up the mould. Before applying each layer, lightly moisten with the water atomizer (ca 4 gram), making sure the water is homogenously sprayed on the foam.

For moisture curing foams, after 24 h the foam sample can be removed and cut in the desired dimension. For other technologies refer to manufacturer's specification.

Prepare at least three specimens according to the steps described above.

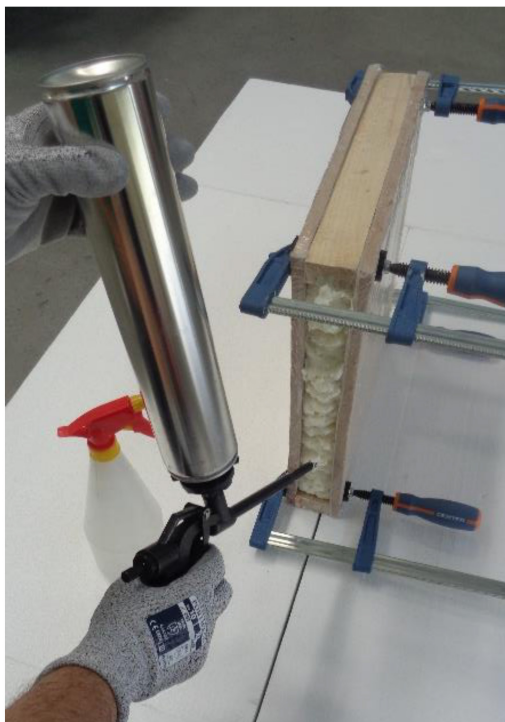


Figure 1 — Prepare the mould and fill with foam

#### 4.4 Test procedure

Store the foam samples for 21 days in an oven at  $(70 \pm 2) ^\circ\text{C}$  for ageing.

Prepare the measuring device. Set mean temperature between hot and cold plate on  $10 ^\circ\text{C}$ , with temperature difference between the two plates, e.g.  $5 ^\circ\text{C}$  and  $15 ^\circ\text{C}$ . Calculate the density by measuring the dimensions and the weight.

Carry out the test on the basis of EN 12667. It is necessary to complete at least three specimen measurements to obtain a statistically relevant mean value.



Figure 2 — Measurement with Thermal Conductivity Meter



#### 4.5 Expression of results

Report:

- name of the test specimen;
- length, width, thickness and density of the test specimen;
- mean temperature of the hot plate in °C;
- mean temperature of the cold plate in °C;
- mean temperature between hot and cold plate in °C;
- mean value of thermal conductivity in W/m.K.

#### 4.6 Test report

The test report shall include the following information:

- a) a reference to this European Standard;
- b) the name and address of the testing laboratory;
- c) the number and date of the test report;
- d) the name and signature of the operator or signatory of the report;
- e) product identification given by the test sponsor;
  - 1) product name, manufacturer or supplier,
  - 2) batch number or identification code,
  - 3) origin of the sample(s),
  - 4) way of dispensing, e.g. dispensing gun or tube,
  - 5) packaging: volume,
  - 6) expiry date and/or production date;
- f) test procedure for test performed according to 4.4:
  - 1) date of test,
  - 2) performer,
  - 3) any deviation from 4.1;
- g) results of test:
  - 1) test results (e.g. individual, mean values and chart of results),
  - 2) observations (if any).

## Bibliography

- [1] FEICA OCF TM 1020:2017 *Determination of the long term Thermal Conductivity of an OCF Canister Foam*

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