

SLOVENSKI STANDARD
oSIST prEN 15100-2:2005
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Toplotnoizolacijski proizvodi za stavbe – Na mestu vgradnje pripravljeni sečninsko formaldehidni penasti (UF) proizvodi – 2. del: Specifikacija za vgrajene izolacijske proizvode

Thermal insulating products for buildings - In-situ formed urea-formaldehyde foam (UF) products - Part 2: Specification for the installed insulation products

Wärmedämmstoffe für Gebäude - An der Verwendungsstelle hergestellte Produkte aus Harnstoff-Formaldehydharz-Schaum (UF) - Teil 2: Spezifikation für die eingebauten Produkte

Produits isolants thermiques pour le bâtiment - Isolation formée en place a base de mousse de formaldéhyde (UF) - Partie 2: Spécification des produits mis en place

Ta slovenski standard je istoveten z: prEN 15100-2

ICS:

91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials
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EUROPEAN STANDARD
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ICS

English version

Thermal insulating products for buildings - In-situ formed urea-formaldehyde foam (UF) products - Part 2: Specification for the installed insulation products

Produits isolants thermiques pour le bâtiment - Isolation formée en place à base de mousse de formaldéhyde (UF) - Partie 2: Spécification des produits mis en place

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 88.

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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Foreword

This document (prEN 15100-2:2004) has been prepared by the Technical Committee CEN/TC 88 “Thermal insulating materials and products”, the Secretariat of which is held by DIN.

This document is currently submitted for CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

This European Standard consists of two parts. The first part, which is the harmonised part satisfying the mandate, the CPD and is the basis for the CE marking, covers the products, which are placed on the market. The second part, which is the non-harmonised part, covers the specification for the installed products.

This European Standard is one of a series for mineral wool, expanded clay, expanded perlite, exfoliated vermiculite, polyurethane/polyisocyanurate, cellulose and urea formaldehyde in-situ formed insulation products used in buildings, but this standard may be used in other areas where appropriate.

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1 Scope

This document specifies requirements for in-situ formed urea formaldehyde foam (UF) products when installed in external walls, internal walls and partitions, floors, galleries and ceilings, roofs and suspended ceilings.

This document is a specification for the installed product.

This document also specifies the checks and test methods to be used for the declarations made by the installer of the product.

This document does not specify the required level of all properties to be achieved by a product to demonstrate fitness for purpose in a particular application. The required levels are to be found in regulations or non-conflicting standards.

This document does not include factory made products utilising urea formaldehyde foam intended to be used for the insulation of buildings or for the insulation of building equipment and industrial installations.

2 Normative references

The following referenced documents are indispensable for the application 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 ISO 6946, *Building components and building elements — Thermal resistance and thermal transmittance — Calculation method*

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EN ISO 10456, *Building materials and products — Procedures for determining declared and design thermal values*

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prEN ISO 9229, *Thermal insulation — Definitions terms*

WI 00088105, *Thermal insulation products for building — In-situ formed urea formaldehyde foam (UF) products — Part 1: Specification for the foam system before installation*

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of this document the definitions given in prEN ISO 9229 and the following definitions apply.

3.1.1

urea formaldehyde foam (UF)

cellular plastics insulation material with a substantially open cell structure based on an amino resin made by the polycondensation of urea with formaldehyde

3.1.2

urea formaldehyde foam system

the kit of constituent components which when dispensed generates the urea formaldehyde foam (UF)

3.1.3**machine**

the equipment used to mix and dispense the foam which is capable of being adjusted to enable foam which complies with the requirements of Part 1 to be produced. The equipment shall be capable of maintaining the temperature of both components at temperatures prescribed by the urea formaldehyde foam system supplier throughout the dispensing of the urea formaldehyde foam system

3.1.4**mixing ratio**

this is the ratio in which the components of the urea formaldehyde system have to be mixed. It can be expressed either by in both weight or by volume ratio

3.1.5**installation**

the process of dispensing the mixture of the components into the cavity to be insulated. The procedure involves dispensing discrete amounts of foam system, according to the manufacturers guidance, so that the height of the foam in the cavity increases by a specified height each time, until it reaches the desired height

3.1.6**injection hole**

a hole cut in the inner or outer face of a cavity through which the urea formaldehyde foam system can be dispensed into the cavity

3.1.7**installed declared thermal resistance**

the time average value of the thermal resistance of the installed insulation over 25 years (see 5.2)

3.1.8**installed declared insulation thickness**

insulation thickness as installed by the installer (see 5.1)

3.2 Symbols and abbreviations**3.2.1 Symbols used in this document:**

d	is the installed declared thickness of the installed insulation product	m
λ_D	is the declared thermal conductivity	W/(m·K)
R_D	is the installed declared thermal resistance	m ² K/W

3.2.2 Abbreviations used in this document:

UF is Urea Formaldehyde foam

ITT is Initial Type Test

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4 Requirements

4.1 General

The installer shall use an insulation product that complies with Part 1 of this standard.

4.2 Suitability of the building equipment or industrial installation for the installation of the product

The installer shall inspect the building equipment or industrial installation in accordance with manufacturer's guidelines and national regulations, in order to determine whether it is suitable for application of the product (see Annex A).

5 In-situ measurements and calculations

5.1 Installed declared insulation thickness

5.1.1 Closed cavities: Average cavity width

The installed declared insulation thickness, d , shall be not less than the specified minimum thickness when determined as the average cavity width in which the insulating foam is created. For cavity walls the average cavity width shall be determined by the procedure given in Annex B.

5.1.2 Flat surfaces

The installed declared insulation thickness, d , shall be determined as follows.

The thickness of the foam shall be measured by inserting a needle at 10 points in the thinnest area. The mean of these ten values shall be expressed as the minimum thickness given to the nearest mm with not more than one value having a lower thickness than the mean by more than 20 %.

5.2 Installed declared thermal resistance, R_D

The installed declared thermal resistance R_D for the installed insulation shall be calculated using the formula:

$$R_D = d/\lambda_D \quad (1)$$

where

d is the installed declared thermal insulation thickness (in metres)

λ_D is the declared thermal conductivity given in Part 1 of the standard

The value of the installed declared thermal resistance shall be rounded downwards to the nearest 0,05 m²K/W.

NOTE 1 EN ISO 6946 gives the calculation rules for thermal resistance and thermal transmittance of building elements and components.

NOTE 2 EN ISO 10456 shows how the design thermal conductivity and thermal resistance are calculated from the corresponding declared thermal values.

5.3 Foam quality checks carried out by the installer

In addition to those checks recommended by the manufacturer, the installer shall, prior to commencing the application of the foam, generate test samples in accordance with the procedures in Annex D of Part 1 of the standard to enable compliance with Part 1 to be confirmed if required.

6 Installer's declaration

The installer shall declare to the customer that the work has been carried out in accordance with the requirements of this standard using an insulation product that complies with Part 1.

The installer shall also declare at least the following information:

- 1) date of the installation;
- 2) installed declared insulation thickness;
- 3) installed declared thermal resistance according to Clause 5.2;
- 4) for the installed product, the trade name, designation code and CE mark of the product (complying with Part 1 of the standard), from which it has been generated.

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Annex A (informative)

Suitability of the building to receive the insulation product

A.1 Building

The installer should ensure that the walls are structurally sound and suitable to receive the foam insulation. This assessment should take into account all aspects of the proposed installation.

A.2 Site survey

The assessment should include the following points;

- A description of the building, for example, brick, stone, concrete, etc;
- A sketch of the building including dimensions of the cavity wall areas;
- A record of cavity construction in the building;
- The state of repair of the internal and external leaves;
- The position of flues, air bricks (indicate on sketch);
- The presence of any internal and external signs of dampness;
- The weather exposure situation of the building;
- Whether the cavity is capped or not.

An example of a survey form which includes the above information is given in Table A.1.