

**SLOVENSKI STANDARD****SIST EN 1170-3:2001****01-april-2001**

---

**Montažni betonski izdelki - Preskusna metoda za steklocementni kompozit - 3. del:  
Merjenje deleža vlaken v brizganem steklocementnem kompozitu**

Precast concrete products - Test method for glass-fibre reinforced cement - Part 3:  
Measuring the fibre content of sprayed GRC

Vorgefertigte Betonerzeugnisse - Prüfverfahren für Glasfaserbeton - Teil 3: Bestimmung  
des Fasergehaltes in frischem GFB beim Spritzverfahren

**PREVIEW**

**(standards.iteh.ai)**

Produits préfabriqués en béton - Méthode d'essai des composites ciment-verre - Partie  
3: Mesure de la teneur en fibres des CCV réalisés par projection

<https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a->

[574b14dacc3/sist-en-1170-3-2001](https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001)

**Ta slovenski standard je istoveten z: EN 1170-3:1997**

---

**ICS:**

91.100.30

Beton in betonski izdelki

Concrete and concrete  
products**SIST EN 1170-3:2001****en**

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

[SIST EN 1170-3:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001>

**EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM**

**EN 1170-3**

November 1997

ICS 91.100.30

Descriptors: concrete products, prefabricated elements, composite materials, cements, glass, verification, conformity tests, fibres, rates: per unit time, computation

English version

**Precast concrete products - Test method for glass-fibre reinforced cement - Part 3: Measuring the fibre content of sprayed GRC**

Produits préfabriqués en béton - Méthode d'essai des composites ciment-verre - Partie 3: Mesure de la teneur en fibres des CCV réalisés par projection

Vorgefertigte Betonprodukte - Prüfverfahren für Glasfaserbeton - Teil 3: Bestimmung des Fasergehaltes in frischem GFB beim Spritzverfahren

This European Standard was approved by CEN on 29 October 1997.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

<https://standardsiteh.ai/catalog/standards/sist/d942423d-18b9-48a3-a7a->

SIST EN 1170-3:2001



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

## Contents

<b>Foreword.....</b>	<b>3</b>
<b>1 Scope .....</b>	<b>4</b>
<b>2 Normative references.....</b>	<b>4</b>
<b>3 Symbols and abbreviations.....</b>	<b>4</b>
<b>3.1 Symbols.....</b>	<b>4</b>
<b>3.2 Abbreviation .....</b>	<b>4</b>
<b>4 Apparatus.....</b>	<b>4</b>
<b>5 Procedure.....</b>	<b>4</b>
<b>6 Calculations .....</b>	<b>5</b>
<b>7 Interpreting the test.....</b>	<b>5</b>
<b>8 Test report sheet .....</b>	<b>6</b>
<b>Annex A (informative) Calculation of the equipment outputs .....</b>	<b>7</b>

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 1170-3:2001

<https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001>



**Foreword**

This European Standard has been prepared by Technical Committee CEN/TC 229 "Precast concrete products", the secretariat of which is held by AFNOR.

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 1998, and conflicting national standards shall be withdrawn at the latest by May 1998.

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

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 1170-3:2001

<https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001>

## 1 Scope

This European Standard specifies a test method for verifying, during production, the fibre content of sprayed glassfibre reinforced cement.

## 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.

EN 1170-2	Precast concrete products - Test method for glassfibre reinforced cement - Part 2 : Measuring the fibre content in fresh GRC - "Wash out test" method
-----------	---

## 3 Symbols and abbreviations

### 3.1 Symbols iTeh STANDARD PREVIEW (standards.iteh.ai)

$G_C$  : fibre content, in percentage by mass ;

$m$  : mass, in grams ; SIST EN 1170-3:2001  
<https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001>

$t$  : time, in seconds.

### 3.2 Abbreviation

**GRC :** Glassfibre reinforced cement.

## 4 Apparatus

The apparatus comprises :

- 1 bucket with a capacity of approximately 10 l ;
- 1 scale, with a measuring range from 0 kg to 20 kg, accurate to 10 g ;
- 1 stopwatch, accurate to 1 s ;
- 1 container, for waste, with a capacity of approximately 5 l.

## 5 Procedure

The test shall be carried out under the same conditions as actual production.

Weigh the empty bucket; i.e.  $m_1$  (in grams).

Weigh the glass fibre roll, i.e.  $m_2$  (in grams).

Start the pump and spray the matrix (without fibres) into the waste container for a brief moment.

Start the cutter and the stopwatch and spray (matrix and fibres) into the bucket for a time " $t$ " expressed in seconds of not less than 30 s, measured with an accuracy of 1s.

Direct the spray to the waste bucket and stop the cutter and matrix pump.

Weigh the bucket filled with fibres and matrix, i.e.  $m_3$  (in grams).

Weigh the glass fibre roll, i.e.  $m_4$  (in grams).

Calculate the fibre content as described in clause 6.

Record the air pressure from the pump pressure gauge.

NOTE : It is possible to carry out a separate output test (fibre only and matrix without fibres) in order to verify in a simplified way the correct working of the equipment.

## 6 Calculations **Teh STANDARD PREVIEW** **(standards.iteh.ai)**

The fibre content  $G_c$ , expressed as a percentage by weight, is determined by the following equation:

SIST EN 1170-3:2001

$$G_c = \frac{m_2 - m_4}{m_3 - m_1} \times 100 \quad \text{https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001}$$

## 7 Interpreting the test

The optimum value is determined by the specification and is a function of end use.

If the result obtained does not comply with the specified value, carry out a second test to validate the information before making adjustments to the process.

NOTE : The specified fibre content (mean fibre content) is set by the manufacturer as a function of the variability of the production so that the glassfibre content of the products is at least equal to the specified value (see annex A).

## 8 Test report sheet

The test report sheet shall comprise the following elements :

- the date of test ;
- the identification of manufacture ;
- the specified composition of the GRC ;
- the intermediate results  $m_1$ ,  $m_2$ ,  $m_3$  and  $m_4$  ;
- the air pressure.

NOTE : An example of the test report sheet is given in EN 1170-2.

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

[SIST EN 1170-3:2001](#)

<https://standards.iteh.ai/catalog/standards/sist/d9d2d23d-18b9-48a3-af2a-574b14dacc3/sist-en-1170-3-2001>