

**Betooni, mördi ja süstmördi lisandid.
Teimimismeetodid. Osa 6:
Infrapunaanalüüs**

Admixtures for concrete, mortar and grout - Test
methods - Part 6: Infrared analysis

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 480-6:2005 sisaldab Euroopa standardi EN 480-6:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 25.11.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 480-6:2005 consists of the English text of the European standard EN 480-6:2005.</p> <p>This document is endorsed on 25.11.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p> |
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| <p>Käsitlusala: See Euroopa standard kirjeldab lisandi identifitseerimise infrapuna-analüüsimeetodit.</p> | <p>Scope: This document describes a method for identifying an admixture by infrared analysis (IR).</p> |
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ICS 91.100.10, 91.100.30

Võtmesõnad: betoon, betooni lisandid, ehitusmaterjalid, infrapuna-spektromeetria, mördid, teimid, tsementeerimine, tähistamine

English Version

**Admixtures for concrete, mortar and grout - Test methods - Part
6: Infrared analysis**

Adjuvants pour béton, mortier et coulis - Méthodes d'essai -
Partie 6: Analyse infrarouge

Zusatzmittel für Beton, Mörtel und Einpressmörtel -
Prüfverfahren - Teil 6: Infrarot-Untersuchung

This European Standard was approved by CEN on 28 July 2005.

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.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard (EN 480-6:2005) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", the secretariat of which is held by DIN.

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 March 2006, and conflicting national standards shall be withdrawn at the latest by March 2006.

It has been drafted by Subcommittee 3 (SC 3) of TC 104 "Admixtures for concrete, mortar and grout".

This document is part of the series EN 480 "Admixtures for concrete, mortar and grout – Test methods" which comprises the following

Part 1 *Reference concrete and reference mortar for testing*

Part 2 *Determination of setting time*

Part 4 *Determination of bleeding of concrete*

Part 5 *Determination of capillary absorption*

Part 6 *Infrared analysis*

Part 8 *Determination of the conventional dry material content*

Part 10 *Determination of water soluble chloride content*

Part 11 *Determination of air void characteristics in hardened concrete*

Part 12 *Determination of the alkali content of admixtures*

Part 13 *Reference masonry mortar for testing mortar admixtures*

Part 14 *Admixtures for concrete, mortar and grout - Test methods - Part 14: Measurement of corrosion susceptibility of reinforcing steel in concrete - Potentiostatic electro-chemical test method ¹⁾*

This document is applicable together with the other standards of the EN 480 series.

This document supersedes EN 480-6:1996.

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

1) This part is under preparation

1 Scope

This document describes a method for identifying an admixture by infrared analysis (IR).

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 480-8: *Admixtures for concrete, mortar and grout - Test methods - Part 8: Determination of the conventional dry material content.*

3 Principle

The IR analysis is performed on dry material from an admixture dried at $(105 \pm 3) ^\circ\text{C}$, unless a different temperature is stated by the manufacturer.

The residue from the determination of the conventional dry material content according to EN 480-8 may be used.

4 Apparatus

4.1 Infrared spectrometer with accessories (cells, pelleting press, *NaCl* windows, etc.);

4.2 Evaporating dish with a flat bottom ca. diameter 75 mm, depth 45 mm;

4.3 Desiccator;

4.4 Oven with forced ventilation²⁾, thermostatically controlled at $(105 \pm 3) ^\circ\text{C}$, fitted with a temperature indicating device. The required temperature range shall be maintained throughout the parts of the oven used for this test;

4.5 Balance with an accuracy of 0,5 g.

5 Procedure

5.1 Preparation of the dry material

The method given in EN 480-8 shall be used³⁾.

5.2 Infrared spectrophotometry

Depending upon the consistence of the dry extract obtained, the test shall be carried out either on a thin film spread on the *NaCl* window (or *KBr* or *CsI* window depending upon the equipment available) using a spatula,

2) Fan circulation is necessary to ensure uniform temperature throughout the oven.

3) Any water in the dry extract will affect the resulting IR spectrum. If this occurs, the period of drying should be extended to remove all water but not to cause breakdown or evaporation of other constituents.