

Unbound and hydraulically bound mixtures - Part 51: Method for the manufacture of test specimens of hydraulically bound mixtures using vibrating hammer compaction

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Method for the manufacture of test specimens of
hydraulically bound mixtures using vibrating hammer
compaction

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13286-51:2005 sisaldab Euroopa standardi EN 13286-51:2004 ingliskeelset teksti. Käesolev dokument on jõustatud 22.02.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13286-51:2005 consists of the English text of the European standard EN 13286-51:2004. This document is endorsed on 22.02.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This document specifies test methods for making cylindrical or cubical specimens of hydraulically bound mixtures compacted to refusal density using a vibrating hammer. This document applies to mixtures, or that part of a mixture, containing aggregate up to a maximum size of 31,5 mm.	Scope: This document specifies test methods for making cylindrical or cubical specimens of hydraulically bound mixtures compacted to refusal density using a vibrating hammer. This document applies to mixtures, or that part of a mixture, containing aggregate up to a maximum size of 31,5 mm.
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ICS 93.080.20

Võtmesõnad: density (mass/volume), pavements, roads, sample divis, samples, sampling, sampling methods, specification (approval), specifications, specimen preparation, storage, test specimens, testing, testing conditions, unbound, vibrated density, vibration, vibration effects

ICS 93.080.20

English version

**Unbound and hydraulically bound mixtures - Part 51: Method for
the manufacture of test specimens of hydraulically bound
mixtures using vibrating hammer compaction**

Mélanges traités et mélanges non traités aux liants
hydrauliques - Partie 51: Méthode de confection par
compactage au marteau vibrant des éprouvettes de
matériaux traités aux liants hydrauliques

Ungebundene und hydraulisch gebundene Gemische - Teil
51: Verfahren zur Herstellung von Probekörpern von
hydraulisch gebundenen Gemischen durch Verdichtung mit
Vibrationshammer

This European Standard was approved by CEN on 12 November 2004.

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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.

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Foreword

This document (EN 13286-51:2004) has been prepared by Technical Committee CEN/TC 227 "Road materials", 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 June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

This document is one of a series of documents as listed below.

EN 13286-1, *Unbound and hydraulically bound mixtures — Part 1: Test methods for laboratory reference density and water content — Introduction, general requirements and sampling*

EN 13286-2, *Unbound and hydraulically bound mixtures — Part 2: Test methods for the determination of the laboratory reference density and water content — Proctor compaction*

EN 13286-3, *Unbound and hydraulically bound mixtures — Part 3: Test methods for laboratory reference density and water content — Vibrocompression with controlled parameters*

EN 13286-4, *Unbound and hydraulically bound mixtures — Part 4: Test methods for laboratory reference density and water content — Vibrating hammer*

EN 13286-5, *Unbound and hydraulically bound mixtures — Part 5: Test methods for laboratory reference density and water content — Vibrating table*

EN 13286-7, *Unbound and hydraulically bound mixtures — Part 7: Cyclic load triaxial test for unbound mixtures*

EN 13286-40, *Unbound and hydraulically bound mixtures — Part 40: Test method for the determination of the direct tensile strength of hydraulically bound mixtures*

EN 13286-41, *Unbound and hydraulically bound mixtures — Part 41: Test method for the determination of the compressive strength of hydraulically bound mixtures*

EN 13286-42, *Unbound and hydraulically bound mixtures — Part 42: Test method for the determination of the indirect tensile strength of hydraulically bound mixtures*

EN 13286-43, *Unbound and hydraulically bound mixtures — Part 43: Test method for the determination of the modulus of elasticity of hydraulically bound mixtures*

EN 13286-44, *Unbound and hydraulically bound mixtures — Part 44: Test method for the determination of the alpha coefficient of vitrified blast furnace slag*

EN 13286-45, *Unbound and hydraulically bound mixtures — Part 45: Test method for the determination of the workability period of hydraulically bound mixtures*

EN 13286-46, *Unbound and hydraulically bound mixtures — Part 46: Test method for the determination of the moisture condition value*

EN 13286-47, *Unbound and hydraulically bound mixtures — Part 47: Test method for the determination of California bearing ratio, immediate bearing index and linear swelling*

prEN 13286-48, *Unbound and hydraulically bound mixtures — Part 48: Test method for the determination of degree of pulverisation*

EN 13286-49, *Unbound and hydraulically bound mixtures — Part 49: Accelerated swelling test for soil treated by lime and/or hydraulic binder*

EN 13286-50, *Unbound and hydraulically bound mixtures — Part 50: Method for the manufacture of test specimens of hydraulically bound mixtures using Proctor equipment or vibrating table compaction*

EN 13286-51, *Unbound and hydraulically bound mixtures — Part 51: Method for the manufacture of test specimens of hydraulically bound mixtures using vibrating hammer compaction*

EN 13286-52, *Unbound and hydraulically bound mixtures — Part 52: Method for the manufacture of test specimens of hydraulically bound mixtures using vibrocompression*

EN 13286-53, *Unbound and hydraulically bound mixtures — Part 53: Methods for the manufacture of test specimens of hydraulically bound mixtures using axial compression*

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 Scope

This document specifies test methods for making cylindrical or cubical specimens of hydraulically bound mixtures compacted to refusal density using a vibrating hammer. This document applies to mixtures, or that part of a mixture, containing aggregate up to a maximum size of 31,5 mm.

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 933-2, *Tests for geometrical properties of aggregates — Part 2: Determination of particle size distribution — Test sieves, nominal size of apertures*

EN 12390-1, *Testing hardened concrete — Part 1: Shape, dimensions and other requirements for specimens and moulds*

EN 13286-4:2003, *Unbound and hydraulically bound mixtures — Part 4: Test method for laboratory reference density and water content — Vibrating hammer*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13286-4:2003 and the following apply.

3.1

vibrating hammer compaction to refusal

method of manufacture of a laboratory test specimen by compacting in layers an undefined quantity of mixture into a mould of known volume using a vibrating hammer and tamper until no further compaction is possible (refusal)

4 Principle

Cylindrical or cubical specimens of the mixture are made by vibrating hammer compaction to refusal. After compaction, the specimens are stored at a specified temperature and for a specified period of time minimizing loss of moisture until required for testing.

5 Dimensions of the specimens

Specimens shall conform to the dimensions given in Table 1.