



SLOVENSKI STANDARD
SIST EN 12697-42:2006

01-april-2006

6]li a Ybg_Y'na Yg]`È`DfYg_i gbY'a YfcXY'nUj fc Y`UgZJfbY'na Yg]`È` (&"XY.
JgYVbcghbY]gfc `df]`dcbcj bc`i dcfUV`YbYa `UgZJhi

Bituminous mixtures - Test methods for hot mix asphalt - Part 42: Amount of coarse foreign matter in reclaimed asphalt

Asphalt - Prüfverfahren für Heiasphalt - Teil 42: Fremdstoffgehalt in Ausbauasphalt
(standards.iteh.ai)

Mlanges bitumineux - Mthodes d'essai pour mlange hydrocarbon a chaud - Partie 42: Quantit de matriaux trangers prsents dans les agrgats d'enrobs

Ta slovenski standard je istoveten z: **EN 12697-42:2005**

ICS:

93.080.20 Materiali za gradnjo cest Road construction materials

SIST EN 12697-42:2006 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 12697-42:2006](#)

<https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12697-42

November 2005

ICS 93.080.20

English Version

Bituminous mixtures - Test methods for hot mix asphalt - Part 42: Amount of coarse foreign matter in reclaimed asphalt

Mélanges bitumineux - Méthodes d'essai pour mélange
hydrocarboné à chaud - Partie 42: Quantité de matériaux
étrangers présents dans les agrégats d'enrobés

Asphalt - Prüfverfahren für Heiasphalt - Teil 42:
Fremdstoffgehalt in Ausbaupasphalt

This European Standard was approved by CEN on 30 September 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.

[SIST EN 12697-42:2006](https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006)

<https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006>



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

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

Content	Page
Foreword	3
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Principle.....	6
5 Apparatus	7
6 Preparation of the sample	7
7 Procedure	7
8 Expression of results.....	8
9 Test report	8
10 Precision data	8

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 12697-42:2006](https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006)

<https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006>

Foreword

This document (EN 12697-42:2005) 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 May 2006, and conflicting national standards shall be withdrawn at the latest by January 2008.

WARNING — The methods described in this draft European Standard require the use of solvents that are hazardous to health and are subject to occupational exposure limits as described in relevant legislation and regulations. Exposure levels are related to both handling procedures and ventilation provision and it is emphasised that adequate training should be given to staff employed in the usage of these substances.

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

EN 12697-1, *Bituminous mixtures — Test methods for hot mix asphalt — Part 1: Soluble binder content.*

EN 12697-2, *Bituminous mixtures — Test methods for hot mix asphalt — Part 2: Determination of particle size distribution.*

EN 12697-3, *Bituminous mixtures — Test methods for hot mix asphalt — Part 3: Bitumen recovery: Rotary evaporator.*

EN 12697-4, *Bituminous mixtures — Test methods for hot mix asphalt — Part 4: Bitumen recovery: Fractionating column.*

EN 12697-5, *Bituminous mixtures — Test methods for hot mix asphalt — Part 5: Determination of the maximum density.*

EN 12697-6, *Bituminous mixtures — Test methods for hot mix asphalt — Part 6: Determination of bulk density of bituminous specimens.*

EN 12697-7, *Bituminous mixtures — Test methods for hot mix asphalt — Part 7: Determination of bulk density of bituminous specimens by gamma rays.*

EN 12697-8, *Bituminous mixtures — Test methods for hot mix asphalt — Part 8: Determination of void characteristics of bituminous specimens.*

EN 12697-9, *Bituminous mixtures — Test methods for hot mix asphalt — Part 9: Determination of the reference density.*

EN 12697-10, *Bituminous mixtures — Test methods for hot mix asphalt — Part 10: Compactability.*

EN 12697-11, *Bituminous mixtures — Test methods for hot mix asphalt — Part 11: Determination of the affinity between aggregate and bitumen.*

EN 12697-12, *Bituminous mixtures — Test methods for hot mix asphalt — Part 12: Determination of the water sensitivity of bituminous specimens.*

EN 12697-13, *Bituminous mixtures — Test methods for hot mix asphalt — Part 13: Temperature measurement.*

EN 12697-42:2005 (E)

- EN 12697-14, *Bituminous mixtures — Test methods for hot mix asphalt — Part 14: Water content.*
- EN 12697-15, *Bituminous mixtures — Test methods for hot mix asphalt — Part 15: Determination of the segregation sensitivity.*
- EN 12697-16, *Bituminous mixtures — Test methods for hot mix asphalt — Part 16: Abrasion by studded tyres.*
- EN 12697-17, *Bituminous mixtures — Test methods for hot mix asphalt — Part 17: Particle loss of porous asphalt specimen.*
- EN 12697-18, *Bituminous mixtures — Test methods for hot mix asphalt — Part 18: Binder drainage.*
- EN 12697-19, *Bituminous mixtures — Test methods for hot mix asphalt — Part 19: Permeability of specimen.*
- EN 12697-20, *Bituminous mixtures — Test methods for hot mix asphalt — Part 20: Indentation using cube or Marshall specimens.*
- EN 12697-21, *Bituminous mixtures — Test methods for hot mix asphalt — Part 21: Indentation using plate specimens.*
- EN 12697-22, *Bituminous mixtures — Test methods for hot mix asphalt — Part 22: Wheel tracking.*
- EN 12697-23, *Bituminous mixtures — Test methods for hot mix asphalt — Part 23: Determination of the indirect tensile strength of bituminous specimens.*
- EN 12697-24, *Bituminous mixtures — Test methods for hot mix asphalt — Part 24: Resistance to fatigue.*
- EN 12697-25, *Bituminous mixtures — Test methods for hot mix asphalt — Part 25: Cyclic compression test.*
- EN 12697-26, *Bituminous mixtures — Test methods for hot mix asphalt — Part 26: Stiffness.*
- EN 12697-27, *Bituminous mixtures — Test methods for hot mix asphalt — Part 27: Sampling.*
- EN 12697-28, *Bituminous mixtures — Test methods for hot mix asphalt — Part 28: Preparation of samples for determining binder content, water content and grading.*
- EN 12697-29, *Bituminous mixtures — Test methods for hot mix asphalt — Part 29: Determination of the dimensions of a bituminous specimen.*
- EN 12697-30, *Bituminous mixtures — Test methods for hot mix asphalt — Part 30: Specimen preparation, impact compactor.*
- EN 12697-31, *Bituminous mixtures — Test methods for hot mix asphalt — Part 31: Specimen preparation, gyratory compactor.*
- EN 12697-32, *Bituminous mixtures — Test methods for hot mix asphalt — Part 32: Laboratory compaction of bituminous mixtures by a vibratory compactor.*
- EN 12697-33, *Bituminous mixtures — Test methods for hot mix asphalt — Part 33: Specimen prepared, by roller compactor.*
- EN 12697-34, *Bituminous mixtures — Test methods for hot mix asphalt — Part 34: Marshall test.*
- EN 12697-35, *Bituminous mixtures — Test methods for hot mix asphalt — Part 35: Laboratory mixing.*
- EN 12697-36, *Bituminous mixtures — Test methods for hot mix asphalt — Part 36: Determination of the thickness of a bituminous pavement.*

EN 12697-37, *Bituminous mixtures — Test methods for hot mix asphalt — Part 37: Hot sand test for the adhesivity of binder on precoated chippings for HRA.*

EN 12697-38, *Bituminous mixtures — Test methods for hot mix asphalt — Part 38: Common equipment and calibration.*

EN 12697-39, *Bituminous mixtures — Test methods for hot mix asphalt — Part 39: Binder content by ignition.*

EN 12697-40, *Bituminous mixtures - Test methods for hot mix asphalt - Part 40: In-situ drainability*

EN 12697-41, *Bituminous mixtures — Test methods for hot mix asphalt — Part 41: Resistance to de-icing fluids.*

EN 12697-42, *Bituminous mixtures — Test methods for hot mix asphalt — Part 42: Amount of foreign matters in reclaimed asphalt.*

EN 12697-43, *Bituminous mixtures — Test methods for hot mix asphalt — Part 43: Resistance to fuel.*

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.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 12697-42:2006](https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006)

<https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006>

EN 12697-42:2005 (E)**1 Scope**

This document (EN 12697-42:2005) specifies a visual method of determining the amount and components of coarse foreign matter in reclaimed asphalt. This method does not completely categorise the foreign matter that can occur in asphalt.

NOTE 1 For the use of reclaimed asphalt in asphalt mixtures, it is important to know the components in the reclaimed asphalt and to what extent coarse foreign matter is present that can influence the properties of the asphalt mix.

NOTE 2 The method is not intended to categorise all foreign materials but rather to ensure that the amount of coarse foreign materials are minimised.

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 932-1:1996, *Test for general properties of aggregates — Part 1: Methods for sampling*.

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

iTeh STANDARD PREVIEW

3 Terms and definitions (standards.iteh.ai)

For the purposes of this document, the terms and definitions given in EN 932-1:1996 and the following apply.

3.1 reclaimed asphalt <https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006>
asphalt made reusable by milling of asphalt road layers, by crushing of lumps torn up from asphalt pavements and asphalt from surplus production

3.2 coarse foreign matter
matter in reclaimed asphalt not derived from asphalt pavements or surplus production, and cold asphalt produced with cut-back bitumen

3.3 primary source
quarry or pit from which aggregate has traditionally been used successfully in the manufacture of one or more types of asphalt

3.4 secondary source
quarry, pit or other source from which aggregate has not traditionally been used successfully in the manufacture of any type of asphalt

4 Principle

The test methodology for determining the amount and components of coarse foreign matter in reclaimed asphalt consists of the visual inspection and determination of the composition of two sub-samples, taken from a representative sample of reclaimed asphalt.

5 Apparatus

- 5.1 **Sieve**, with a nominal aperture size of 8 mm, conforming to EN 933-2.
- 5.2 **Balance** to weight to 1 g.
- 5.3 **Sampling divider**, conforming to either EN 932-1 or EN 12697-27.
- 5.4 **Hydrochloric acid**, 1 mol/l.
- 5.5 **Hydrocarbon solvent** (Dichloromethane/methylene chloride or trichloroethylene).
- 5.6 **Water**.

6 Preparation of the sample

- 6.1 The reclaimed asphalt on the feedstock shall be visually inspected for the presence of coarse foreign materials.

When coarse foreign matter is present, take a representative sample of reclaimed asphalt from the feedstock. The sample shall be at least 20 kg.

- 6.2 Sieve the sample using the sieve described in 5.1. Take the portion of the sample remaining in the sieve and divide it into two sub-samples by means of the sampling divider.

NOTE The composition of the fraction of the sample remaining in the sieve is taken to be representative of the composition of the total amount of reclaimed asphalt from which the sample was taken.

SIST EN 12697-42:2006

7 Procedure <https://standards.iteh.ai/catalog/standards/sist/2aa83d52-f710-4574-a05a-ac0fb547d2fa/sist-en-12697-42-2006>

- 7.1 The two sub-samples shall be visually inspected for the presence of coarse foreign matter and the composition of each sub-sample shall be established as specified in 7.2. Each sub-sample shall be visually inspected and its composition determined and the two analyses shall be independent of each other.

NOTE 1 Cold asphalt produced with cut-back bitumen may be hard to distinguish from "asphalt". However in that case the cold asphalt may be considered as "asphalt": any cut-back in the reclaimed asphalt will affect binder. Distinction is favourable as the presence of flux may influence the final binder properties to an unwanted level or may lead to safety risks during the production of recycling asphalt.

NOTE 2 Because of the strong influence of the analyst on the test result executing the test twice by two independent analyses is required.

- 7.2 Each sub-sample shall be sorted into:

- a) material derived from asphalt;
- b) coarse foreign matter derived from asphalt (cold asphalt produced with cut-back bitumen);
- c) coarse foreign matter not derived from asphalt, divided into site materials and other materials.

NOTE 1 Site materials include, for example: cement concrete and cement concrete products; bricks; unbound pavement materials including fine natural aggregate, from secondary sources; cement mortar. Other materials include, for example: metals; synthetic materials; plastic; wood.

NOTE 2 If necessary, washing the material with water before inspection may be helpful in order to facilitate the inspection.