

**Bitumen and bituminous binders - Bituminous emulsions, fluxed and cut-back bitumen factory production control CONSOLIDATED TEXT**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 14733:2005+A1:2010 sisaldab Euroopa standardi EN 14733:2005+A1:2010 ingliskeelset teksti.

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Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 14733:2005+A1:2010 consists of the English text of the European standard EN 14733:2005+A1:2010.

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English Version

**Bitumen and bituminous binders - Bituminous emulsions, fluxed  
and cut-back bitumen factory production control**

Bitumes et liants bitumineux - Maîtrise de la production en  
usine des émulsions de bitume, des bitumes fluxés et  
fluidifiés

Bitumen und bitumenhaltige Bindemittel - Werkseigene  
Produktionskontrolle von Bitumenemulsionen, gefluxtem  
und verschnittenem Bitumen

This European Standard was approved by CEN on 21 April 2005 and includes Amendment 1 approved by CEN on 16 August 2010.

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## Contents

Page

Foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	7
4 Requirements .....	7
4.1 Factory Production Control (FPC): general .....	7
4.2 Quality Plan .....	7
4.3 Organisation.....	8
4.4 Document control .....	9
5 Control procedures.....	9
5.1 Constituent materials .....	9
5.2 Purchaser supplied product.....	9
5.3 Process control.....	10
5.4 Handling, storage and delivery .....	10
5.5 Factory calibration and maintenance .....	10
6 Inspection and testing.....	10
6.1 General.....	10
6.2 Incoming constituent materials.....	10
6.3 Finished binders .....	11
7 Non-conformity .....	11
7.1 General.....	11
7.2 Non-conformity of constituent material .....	12
7.3 Non-conformity of binders (arising from in-process inspection).....	12
7.4 Non-conformity of binder (arising from analysis of finished product) .....	12
8 Inspection, measuring and test equipment .....	12
9 Records.....	13
10 Operative competence .....	13
Bibliography .....	20

## Foreword

This document (EN 14733:2005+A1:2010) has been prepared by Technical Committee CEN/TC 336 "Bituminous binders", 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 April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1, approved by CEN on 2010-08-16.

This document supersedes EN 14733:2005.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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 Construction Products Directive 89/106/CE.

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

## Introduction

This European Standard for Factory Production Control (FPC) is suitable for use in more general quality systems in the binder industry. The document is based on certain requirements of EN ISO 9001 but stands alone and does not require reference to EN ISO 9001 for its application.

The system in this European Standard builds mainly upon traditional sampling and testing of constituent materials and finished product. Processes as well as process control systems are continuously being developed which means that new systems for Factory Production Control will be introduced and implemented. If a producer is able to demonstrate that his process control system is able to secure the fulfilment of the requirements on the finished products in a satisfactory way then alternative frequencies of inspection and testing to those indicated in this document may be appropriate.

The Factory Production Control (FPC) has the aim of providing adequate assurance that the binder conforms with the relevant technical specifications.

The basis of this European Standard is that of the control of constituents, composition and manufacturing. It does not involve the routine monitoring of the performance properties of the binder. Concerning [A<sub>1</sub>] cationic emulsions [A<sub>1</sub>], this is dealt with separately in EN 13808 whereas for cut-back and bituminous binders, is dealt with by another standard, which is currently in progress.

## 1 Scope

This European Standard specifies Factory Production Control (FPC) requirements for use by the manufacturers of bituminous emulsions, cut-back and fluxed binders.

This European Standard is applicable to the control of bituminous binders where the constituents and composition are known, having been derived from a prescriptive specification or from the Initial Type Test (ITT) procedure for demonstration of performance related properties described in the appropriate product standard or from a European Technical Approval.

NOTE 1 Factory Production Control is a requirement of all harmonised elements of harmonised European Standards and European Technical Approvals for bituminous binders if the CE mark of conformity is to be affixed. The system can also be applied to non-harmonised elements and to situations where CE marking is not mandatory.

NOTE 2 Regulated properties of the products are involved in this document.

## 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 1425, *Bitumen and bituminous binders — Characterization of perceptible properties*

EN 1426, *Bitumen and bituminous binders — Determination of needle penetration*

EN 1427, *Bitumen and bituminous binders — Determination of the softening point — Ring and Ball method*

EN 1428, *Bitumen and bituminous binders — Determination of water content in bitumen emulsions — Azeotropic distillation method*

EN 1429, *Bitumen and bituminous binders — Determination of residue on sieving of bituminous emulsions and determination of storage stability by sieving*

EN 1431, *Bitumen and bituminous binders — Determination of residual binder and oil distillate from bitumen emulsions by distillation*

EN 12592, *Bitumen and bituminous binders — Determination of solubility*

EN 12595, *Bitumen and bituminous binders — Determination of kinematic viscosity*

EN 12596, *Bitumen and bituminous binders — Determination of dynamic viscosity by vacuum capillary*

prEN 12846-1, *Bitumen and bituminous binders — Determination of efflux time by the efflux viscometer — Part 1 : Bituminous emulsions*

prEN 12846-2, *Bitumen and bituminous binders — Determination of efflux time by the efflux viscometer — Part 2 : Cut-back and fluxed bituminous binders*

EN 12847, *Bitumen and bituminous binders — Determination of settling tendency of bituminous emulsions*

EN 12848, *Bitumen and bituminous binders — Determination of mixing stability with cement of bituminous emulsions*

EN 12850, *Bitumen and bituminous binders — Determination of the pH value of bituminous emulsions*

prEN 13074-1:2008, *Bitumen and bituminous binders — Recovery of binder from bituminous emulsion or from cut-back or fluxed bitumen by evaporation*

prEN 13074-2, *Bitumen and bituminous binders — Stabilisation of binder from bituminous emulsion or from cut-back or fluxed bitumen after recovery* <sup>A1</sup>

EN 13075-1, *Bitumen and bituminous binders — Determination of breaking behaviour — Part 1: Determination of breaking value of cationic bituminous emulsions, mineral filler method*

EN 13075-2, *Bitumen and bituminous binders — Determination of breaking behaviour — Part 2: Determination of fines mixing time of cationic bituminous emulsions*

EN 13302, *Bitumen and bituminous binders — Determination of dynamic viscosity of bituminous binder using a rotating spindle apparatus* <sup>A1</sup>

<sup>A1</sup> deleted text <sup>A1</sup>

EN 13358, *Bitumen and bituminous binders — Determination of the distillation characteristics of petroleum cut-back bitumen products*

EN 13398, *Bitumen and bituminous binders — Determination of the elastic recovery of modified bitumen* <sup>A1</sup>

EN 13587, *Bitumen and bituminous binders — Determination of the tensile properties of bituminous binders by the tensile test method*

EN 13588, *Bitumen and bituminous binders — Determination of cohesion of bituminous binders with pendulum test*

EN 13589, *Bitumen and bituminous binders — Determination of the tensile properties of modified bitumen by the force ductility method*

EN 13614, *Bitumen and bituminous binders — Determination of adhesivity of bitumen emulsions by water immersion test — Aggregate method* <sup>A1</sup>

EN 13703, *Bitumen and bituminous binders — Determination of deformation energy*

EN 13808, *Bitumen and bituminous binders — Framework for specifying cationic bituminous emulsions* <sup>A1</sup>

EN 14769, *Bitumen and bituminous binders — Accelerated long-term ageing conditioning by a Pressure Ageing Vessel (PAV)* <sup>A1</sup>

<sup>A1</sup> deleted text <sup>A1</sup>

EN 15322, *Bitumen and bituminous binders — Framework for specifying cut-back and fluxed bituminous binders*

EN 15626, *Bitumen and bituminous binders — Determination of adhesivity of cut-back and fluxed bituminous binders by water immersion test — Aggregate method*

EN ISO 2592, *Determination of flash and fire points — Cleveland open cup method (ISO 2592:2000)* <sup>A1</sup>

EN ISO 2719, *Determination of flash point — Pensky-Martens closed cup method (ISO 2719:2002)*

EN ISO 3405, *Petroleum products — Determination of distillation characteristics at atmospheric pressure (ISO 3405:2000)*

EN ISO 3675, *Crude petroleum and liquid petroleum products — Laboratory determination of density — Hydrometer method (ISO 3675:1998)*

EN ISO 9001, <sup>A1</sup> *Quality management systems — Requirements (ISO 9001:2008)* <sup>A1</sup>

EN ISO 13736, *Determination of flash point — Abel closed cup method (ISO 13736:2008)* <sup>A1</sup>