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BSI Standards Publication

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

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This British Standard is the UK implementation of EN 1429:2013. It supersedes BS EN 1429:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PTI/13, Petroleum Testing and Terminology.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Bitumen and bituminous binders - Determination of residue on sieving of bituminous emulsions, and determination of storage stability by sieving

Bitumes et liants bitumineux - Détermination du résidu sur tamis des émulsions de bitume et détermination de la stabilité au stockage par tamisage

Bitumen und bitumenhaltige Bindemittel - Bestimmung des Siebrückstandes von Bitumenemulsionen und Bestimmung der Lagerbeständigkeit durch Sieben

This European Standard was approved by CEN on 11 April 2013.

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Foreword

This document (EN 1429:2013) 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of an identical text or by endorsement, at the latest by December 2013, and conflicting national standards shall be withdrawn at the latest by December 2013.

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 supersedes EN 1429:2009.

The main technical changes brought to EN 1429 are as follows:

— Less stringent precision requirements for the weighing scale to be used in 8.2 and Clause 9.

— More accurate definition of dilution procedures for viscous emulsions (8.2.9 and 8.3.8).

— Revision of procedure for determination of the storage stability by sieving (Clause 9).

WARNING — The use of this European Standard may involve hazardous materials, operations and equipment. This European Standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this European Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. Also, for environmental aspects, it is important to limit the quantities of products, solvents and energy sources to reduce the emissions in air and water and the wastes to the minimum required for a valid test realisation.

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1 Scope

This European Standard specifies methods utilising sieving for the determination of the quantity of coarse particles of binder present in bitumen emulsions, and for the determination of storage stability.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 58, *Bitumen and bituminous binders — Sampling bituminous binders*

EN 12594, *Bitumen and bituminous binders — Preparation of test samples*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696)*

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
residue on sieving
mass fraction in % of particles retained on a sieve of a mesh size specified in this European Standard

3.2
storage stability
ability of a bituminous emulsion not to form more coarse particles within a period specified under an appropriate emulsion specification

Note 1 to entry: Storage stability is a different concept than settling tendency as defined and measured by EN 12847. Although both phenomena are often linked, an emulsion may settle without modification of particle size distribution (no coalescence of emulsion droplets).

Note 2 to entry: The purpose of the limits fixed by the emulsion specification is to ensure that there cannot be any disturbance of the workability of the bitumen emulsion under practical conditions.

4 Principle

A known mass of bituminous emulsion is filtered through either a prepared sieve with a mesh size of 0,500 mm or through two prepared sieves with mesh sizes of 0,500 mm and of 0,160 mm. The amount of binder retained on the sieves is weighed after washing and drying.

Storage stability is determined as the amount of binder retained on the sieve with a mesh size of 0,500 mm after a defined storage period (n days).

5 Reagents and materials

Use only reagents of recognised analytical grade and water conforming to grade 3 of EN ISO 3696.