PD CEN/TS 17482:2020

BSI Standards Publication

Bitumen and bituminous binders - Determination of acid number of bitumen – Potentiometric method

bsi.

National foreword

This Published Document is the UK implementation of CEN/TS 17482:2020.

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 committee manager.

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English Version

Bitumen and bituminous binders - Determination of acid number of bitumen - Potentiometric method

Bitumes et liants bitumineux - Détermination de l'indice d'acide d'un bitume - Méthode potentiométrique

Bitumen und bitumenhaltige Bindemittel - Bestimmung der Säurezahl von Bitumen - Potentiometrisches Verfahren

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European foreword

This document (CEN/TS 17482:2020) has been prepared by Technical Committee CEN/TC 336 "Bituminous binders", the secretariat of which is held by AFNOR.

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1 Scope

This document describes a method for the determination of the free acidic constituents present in bitumen, conventionally known as acid number.

WARNING — The use of this document may involve hazardous materials, operations and equipment. This document does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 58, *Bitumen and bituminous binders — Sampling bituminous binders*

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

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
acid number
number of milligrams of potassium hydroxide necessary for the neutralization of the free acids contained in one gram of bitumen

3.2
equivalence point
stage of the titration procedure at which the added volume (equivalent volume) of titration reagent has allowed to neutralize the acid compounds of the test sample

NOTE In potentiometric titration, this point corresponds to the inflexion point of the potential curve.

4 Principle

The bitumen is dissolved in a solvent-alcohol mixture. The acidic constituents are titrated using a solution of alcoholic potassium hydroxide. The titration is monitored by potentiometry.

5 Products and reagents

5.1 General

Only use reagents of a quality recognized for analysis.

5.2 Potassium hydroxide RP (analytical grade), in pellets.

5.3 Propan-2-ol (isopropanol) **RP** (analytical grade).