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**TESTS FOR MECHANICAL AND PHYSICAL
PROPERTIES OF AGGREGATES - PART 7:
DETERMINATION OF THE PARTICLE DENSITY
OF FILLER - PYKNOMETER METHOD**

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English Version

Tests for mechanical and physical properties of aggregates -
Part 7: Determination of the particle density of filler - Pycnometer
method

Essais pour déterminer les caractéristiques mécaniques et
physiques des granulats - Partie 7: Détermination de la
masse volumique absolue du filler - méthode au
picnomètre

Prüfverfahren für mechanische und physikalische
Eigenschaften von Gesteinskörnungen - Teil 7:
Bestimmung der Rohdichte von Füller - Pycnometer-
Verfahren

This European Standard was approved by CEN on 4 February 2008.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

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Foreword

This document (EN 1097-7:2008) has been prepared by Technical Committee CEN/TC 154 "Aggregates", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by September 2008, and conflicting national standards shall be withdrawn at the latest by September 2008.

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 1097-7:1999.

This European Standard forms part of a series of standards for tests for mechanical and physical properties of aggregates. Test methods for other properties of aggregates will be covered by parts of the following European Standards:

EN 932, Tests for general properties of aggregates

EN 933, Tests for geometrical properties of aggregates

EN 1367, Tests for thermal and weathering properties of aggregates

EN 1744, Tests for chemical properties of aggregates

EN 13179, Tests for filler aggregate used in bituminous mixtures

The other parts of EN 1097 will be:

Part 1: Determination of the resistance to wear (micro-Deval)

Part 2: Methods for the determination of resistance to fragmentation

Part 3: Determination of loose bulk density and voids

Part 4: Determination of the voids of dry compacted filler

Part 5: Determination of the water content by drying in a ventilated oven

Part 6: Determination of particle density and water absorption

Part 8: Determination of the polished stone value

Part 9: Determination of the resistance to wear by abrasion from studded tyres - Nordic test

Part 10: Determination of water suction height

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, 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 the United Kingdom.

1 Scope

This standard describes the reference method used for type testing and in cases of dispute for the determination of the particle density of filler by means of a pycnometer. For other purposes, in particular factory production control, other methods may be used provided that an appropriate working relationship with the reference method has been established.

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 932-2, *Tests for general properties of aggregates - Part 2: Methods for reducing laboratory samples*

EN 932-5, *Tests for general properties of aggregates - Part 5: Common equipment and calibration*

ISO 3507, *Laboratory glassware - Pycnometers*

3 Terms and definitions

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

3.1

laboratory sample

reduced sample derived from a bulk sample for laboratory testing

3.2

test portion

sample used as a whole in a single test

3.3

test specimen

sample used in a single determination when a test method requires more than one determination of a property

3.4

constant mass

successive weighings after drying at least 1 h apart not differing by more than 0,1 %

NOTE In many cases constant mass can be achieved after a test portion has been dried for a pre-determined period in a specified oven (see 6.6) at (110 ± 5) °C. Test laboratories can determine the time required to achieve constant mass for specific types and sizes of sample dependent upon the drying capacity of the oven used.

3.5

particle density of filler

mass per volume unit of filler excluding any trapped air

3.6

filler aggregate

aggregate, most of which passes a 0,063 mm sieve, which can be added to construction materials to provide certain properties

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