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Irish Standard
I.S. EN 1097-2:2010

Tests for mechanical and physical properties of aggregates - Part 2: Methods for the determination of resistance to fragmentation

I.S. EN 1097-2:2010

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Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

**Tests for mechanical and physical properties of aggregates -
Part 2: Methods for the determination of resistance to
fragmentation**

Essais pour déterminer les caractéristiques mécaniques et
physiques de granulats - Partie 2 : Méthodes pour la
détermination de la résistance à la fragmentation

Prüfverfahren für mechanische und physikalische
Eigenschaften von Gesteinskörnungen - Teil 2: Verfahren
zur Bestimmung des Widerstandes gegen Zertrümmerung

This European Standard was approved by CEN on 21 February 2010.

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 1097-2:2010) 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of an identical text or by endorsement, at the latest by September 2010, and conflicting national standards shall be withdrawn at the latest by September 2010.

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 1097-2:1998.

This standard forms part of a series of tests for mechanical and physical properties of aggregates. Test methods for other properties of aggregates are covered by the following European Standards:

- EN 932 (all parts), *Tests for general properties of aggregates*
- EN 933 (all parts), *Tests for geometrical properties of aggregates*
- EN 1367 (all parts), *Tests for thermal and weathering properties of aggregates*
- EN 1744 (all parts), *Tests for chemical properties of aggregates*
- EN 13179 (all parts), *Tests for filler aggregate used in bituminous mixtures*

EN 1097, *Tests for mechanical and physical properties of aggregates*, consists of the following parts:

- *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 7: Determination of the particle density of filler — Pycnometer method*
- *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, 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 the United Kingdom.

1 Scope

This European Standard describes the reference method, the Los Angeles test, used for type testing and in case of dispute (and an alternative method, the impact test) for determining the resistance to fragmentation of coarse aggregates and aggregates for railway ballast (Annex A). 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.

This European Standard applies to natural, manufactured or recycled aggregates used in building and civil engineering.

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, *Tests for general properties of aggregates — Part 1: Methods for sampling*

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*

EN 933-1, *Tests for geometrical properties of aggregates — Part 1: Determination of particle size distribution — Sieving method*

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

EN 1097-6:2000, *Tests for mechanical and physical properties of aggregates — Part 6: Determination of particle density and water absorption*

EN 10025-2:2004, *Hot rolled products of structural steels — Part 2: Technical delivery conditions for non-alloy structural steels*

3 Terms and definitions

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

3.1

Los Angeles coefficient

LA

percentage of the test portion passing a pre-determined sieve after completion of the test

3.2

impact value

SZ

value SZ which gives a measure of the resistance of aggregates to dynamic crushing, and is equal to one fifth of the sum of the mass percentages of the tested sample passing through five specified test sieves when tested in accordance with Clause 6

3.3

test specimen

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

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