



BSI Standards Publication

Tests for mechanical and physical properties of aggregates

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

National foreword

This British Standard is the UK implementation of EN 1097-9:2014. It supersedes BS EN 1097-9:1998 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/502, Aggregates.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014. Published by BSI Standards Limited 2014

ISBN 978 0 580 80136 5

ICS 91.100.15

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2014.

Amendments issued since publication

Date	Text affected
------	---------------

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 1097-9

January 2014

ICS 91.100.15

Supersedes EN 1097-9:1998

English Version

Tests for mechanical and physical properties of aggregates - Part 9: Determination of the resistance to wear by abrasion from studded tyres - Nordic test

Essais pour déterminer les propriétés mécaniques et
physiques des granulats - Partie 9: Détermination de la
résistance à l'usure par abrasion provoquée par les pneus à
crampons - Essai scandinave

Prüfverfahren für mechanische und physikalische
Eigenschaften von Gesteinskörnungen - Teil 9:
Bestimmung des Widerstandes gegen Verschleiß durch
Spikereifen - Nordische Prüfung

This European Standard was approved by CEN on 3 November 2013.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
Foreword.....	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Principle	6
5 Apparatus	6
5.1 Standard apparatus	6
5.2 Special apparatus	6
6 Preparation of test specimens	8
7 Procedure	9
8 Calculation and expression of results	9
9 Test report	10
9.1 Required data	10
9.2 Optional data	10
10 Precision	10
Annex A (informative) Alternative 8/11,2 mm size fraction for the Nordic test	11
Bibliography	12

Foreword

This document (EN 1097-9:2014) 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 July 2014 and conflicting national standards shall be withdrawn at the latest by July 2014.

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 1097-9:1998.

The main technical changes compared to EN 1097-9:1998 are the following:

- 1) Scope: rewritten to allow the use of other methods under precise conditions;
- 5) Apparatus: Possibility to use other suitable equipment for drying aggregates than the prescribed ventilated oven. Steel quality has been updated;
- 6) Preparation of test specimens: rewritten (*Mass of test portion*: Formula revised, *Loading the drum*: Order changed);
- 8) Calculation and expression of results: the re-testing criteria has been amended and supplemented with Dixon test guidelines;
- 9) Test report: required and optional data have harmonized according to document CEN/TC 154/SC 6 – N 1120.

The test procedure specified in this European Standard has been developed in Finland, Norway and Sweden where studded tyres are frequently used during cold seasons.

This European 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, *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*

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*