

**Road restraint systems - Part 3:
Performance classes, impact test
acceptance criteria and test methods
for crash cushions**

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classes, impact test acceptance criteria and test
methods for crash cushions

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1317-3:2000 sisaldab Euroopa standardi EN 1317-3:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 13.10.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1317-3:2000 consists of the English text of the European standard EN 1317-3:2000.</p> <p>This document is endorsed on 13.10.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard gives requirements for the performance of crash cushions. It defines performance classes and acceptance criteria for impact tests.</p>	<p>Scope: This European Standard gives requirements for the performance of crash cushions. It defines performance classes and acceptance criteria for impact tests.</p>
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ICS 13.200, 93.080.30

Võtmesõnad:

English version

Road restraint systems

Part 3: Performance classes, impact test acceptance criteria and test methods for crash cushions

Dispositifs routiers de retenue –
Partie 3: Atténuateurs de choc –
Classes de performance, critères
d'acceptation des essais de choc et
méthodes d'essai

Rückhaltesysteme an Straßen –
Teil 3: Leistungsklassen, Abnahme-
kriterien für Anprallprüfungen und
Prüfverfahren für Anpralldämpfer

This European Standard was approved by CEN on 2000-04-10.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 226 "Road equipment" 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 November 2000, and conflicting national standards shall be withdrawn at the latest by November 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard consists of the following Parts under the general title : Road restraint systems.

- Part 1 : Terminologie and general criteria for test methods;
- Part 2 : Performance classes, impact test acceptance criteria and test methods for safety barriers;
- Part 3 : Performance classes, impact test acceptance criteria and test methods for crash cushions;

The following Parts have not yet available but in course of preparation:

- Part 4: Impact tests acceptance criteria and test methods for terminals and transitions of safety barriers;
- Part 5: Durability and evaluation of conformity;
- Part 6: Pedestrian road restraint system, pedestrian parapet.

Introduction

Based on safety considerations, the design of roads may require the installation of crash cushions at certain locations. These are designed to reduce the severity of vehicle impact with a more resistive object.

One objective of this standard is to lead to the harmonisation of current national standards and/or regulations for crash cushions and to categorize them into performance classes.

The standard specifies the levels of performance, required of crash cushions, for the restraint and/or redirection of impacting vehicles.

The impact severity of vehicles in collision with crash cushions is rated by the indices Theoretical Head Impact Velocity (THIV), Post-impact Head Deceleration (PHD) and Acceleration Severity Index (ASI) (see EN 1317-1).

The different performance levels will enable national and local authorities to specify the performance class of crash cushions. The type or class of road, its location, its geometrical layout, the existence of a vulnerable structure or potentially hazardous area adjacent to the road are factors to be taken into consideration.

Attention is drawn to the fact that the acceptance of a crash cushion will require the successful completion of a series of tests (see table 1, 2, 3, etc.).

Additional sensitive areas, including transitions to an obstacle or a safety barrier, should be considered for tests.

To ensure proper use of this Part of the standard, it is essential to consider all of the other Parts of this standard, especially Part 5 : Durability and attestation of conformity.

1 Scope

This European Standard specifies requirements for the performance of crash cushions from vehicle impacts. It specifies performance classes and acceptance criteria for impact tests.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1317-1	Road restraint systems - Part 1 : Terminology and general criteria for test methods
ISO 6487	Road vehicles - Measurement techniques in impact tests - Instrumentation
ISO 10392	Road vehicles with two axles - Determination of centre of gravity