
**Railway applications — Suspension
components —**

**Part 1:
Characteristics and test methods for
elastomer-mechanical parts**

Applications ferroviaires — Pièces de suspension —

*Partie 1: Caractéristiques et méthodes d'essai pour les pièces en
caoutchouc et les pièces en caoutchouc-métal*





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Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Symbols and abbreviated terms	2
5 Three-dimensional definition of characteristics	5
6 Conditions of use	7
6.1 Environmental conditions	7
6.2 Operating temperatures	7
6.3 Operating loading conditions	7
6.4 Recycling	8
7 Definition of the product	8
7.1 General	8
7.1.1 Definition of characteristics	8
7.1.2 Mounting conditions	8
7.1.3 Ambient conditions	8
7.2 Resistance to environmental conditions	9
7.2.1 General	9
7.2.2 Low temperature	9
7.2.3 High temperature	10
7.2.4 Ozone	10
7.2.5 Oil and petroleum products	10
7.2.6 Chemical products	10
7.2.7 Abrasion	11
7.2.8 Fire behaviour	11
7.2.9 Corrosion	11
7.2.10 Other conditions	11
7.3 Resistance to operating conditions	11
7.3.1 Fatigue resistance	11
7.3.2 Static creep	12
7.3.3 Dynamic creep	12
7.3.4 Static relaxation	12
7.3.5 Dynamic relaxation	12
7.3.6 Electrical resistance	12
7.3.7 Other conditions	12
7.4 Physical characteristics	12
7.4.1 Materials	12
7.4.2 Mass	12
7.5 Geometrical and dimensional characteristics	13
7.5.1 Space envelope	13
7.5.2 Dimensions	13
7.6 Functional characteristics	13
7.6.1 Dimensions under load	13
7.6.2 Force under deformation	13
7.6.3 Characteristic "force as a function of displacement" at constant velocity	13
7.6.4 Stiffnesses under sinusoidal motion	16
7.6.5 Damping	18
7.6.6 Bonding test	19
8 Inspection and test methods	19
8.1 General	19

8.1.1	General test conditions.....	19
8.1.2	Instrumentation	20
8.1.3	Definition and preparation of test pieces	20
8.2	Resistance to environmental conditions	20
8.2.1	General.....	20
8.2.2	Low temperature	20
8.2.3	High temperature.....	20
8.2.4	Ozone	21
8.2.5	Oil and petroleum products	21
8.2.6	Chemical products.....	21
8.2.7	Abrasion	21
8.2.8	Fire behaviour.....	21
8.2.9	Corrosion.....	21
8.2.10	Other conditions.....	21
8.3	Resistance to operating conditions	21
8.3.1	Fatigue resistance	21
8.3.2	Static creep.....	22
8.3.3	Dynamic creep	24
8.3.4	Static relaxation	24
8.3.5	Dynamic relaxation.....	25
8.3.6	Electrical resistance	25
8.3.7	Other conditions.....	25
8.4	Physical characteristics	25
8.4.1	Materials	25
8.4.2	Mass	25
8.5	Geometrical and dimensional characteristics.....	25
8.5.1	Space envelope	25
8.5.2	Dimensions.....	25
8.6	Functional characteristics	25
8.6.1	Dimensions under load	25
8.6.2	Force under deformation.....	27
8.6.3	Characteristics "force as a function of displacement" at constant velocity.....	28
8.6.4	Stiffnesses under sinusoidal motion.....	30
8.6.5	Damping	33
8.6.6	Bonding test.....	34
9	Marking.....	34
Annex A (normative) Design of the test devices and analysis of the parasitic deformations during stiffness measurements		35
Annex B (informative) Two examples of fatigue test programmes.....		36
Annex C (informative) Recommended tolerances and acceptance criteria for characteristics of components.....		40
Annex D (informative) Recommended measurement velocities.....		42

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 269, *Railway applications*, Subcommittee SC 2, *Rolling stock*.

A list of all parts in the ISO 22749 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document is based on EN 13913.

Designing an elastomer-mechanical part requires knowledge of the mechanical system of which it forms part. Therefore, specific characteristics are needed for each case, which only the customer can specify.

This document is the result of the studies and research to improve the performances and quality of elastomer-mechanical parts in order to meet the requirements of railway rolling stock.

This document is designed for railway operators, manufacturers and equipment suppliers of the railway industry as well as for the suppliers of elastomer-mechanical parts.

Railway applications — Suspension components —

Part 1: Characteristics and test methods for elastomer-mechanical parts

1 Scope

This document applies to elastomer-mechanical parts designed to be fitted on railway vehicles and similar vehicles running on dedicated tracks with permanent guide systems, whatever the type of rail and the running surface.

Typical applications of the elastomer-mechanical parts include:

- vehicle suspension systems;
- equipment mounting systems;
- joints (e.g. end-mountings of dampers, rubber-based bearings, elastomer-mechanical parts used on mechanical couplings);
- limit stops.

These parts can be:

- made entirely of elastomer, operating on their own or in combination with other elastic parts;
- made up of elastomer and other materials, adherent together or not.

This document specifies characteristics that rubber and rubber to metal parts are to achieve, together with applicable inspection and test methods to be carried out for verification.

This document does not apply to:

- rubber diaphragms for pneumatic suspension springs;
- elastic parts of buffing and drawgear springs;
- diaphragms, bellows and seals;
- hoses and tubings;
- transmission belts.

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.

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effects of liquids*