



SLOVENSKI STANDARD SIST EN ISO 11403-1:2014

01-september-2014

Nadomešča:

SIST EN ISO 11403-1:2003

Polimerni materiali - Pridobitev in predstavitev primerljivih podatkov, dobljenih pri različnih pogojih - 1. del: Mehanske lastnosti (ISO 11403-1:2014)

Plastics - Acquisition and presentation of comparable multipoint data - Part 1: Mechanical properties (ISO 11403-1:2014)

Kunststoffe - Ermittlung und Darstellung von vergleichbaren Vielpunkt-Kennwerten - Teil 1: Mechanische Eigenschaften (ISO 11403-1:2014)

Plastiques - Acquisition et présentation de données multiples comparables - Partie 1: Propriétés mécaniques (ISO 11403-1:2014)

Ta slovenski standard je istoveten z: EN ISO 11403-1:2014

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general
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SIST EN ISO 11403-1:2014

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN ISO 11403-1

June 2014

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Supersedes EN ISO 11403-1:2003

English Version

Plastics - Acquisition and presentation of comparable multipoint data - Part 1: Mechanical properties (ISO 11403-1:2014)

Plastiques - Acquisition et présentation de données multiples comparables - Partie 1: Propriétés mécaniques (ISO 11403-1:2014)

Kunststoffe - Ermittlung und Darstellung von vergleichbaren Vielpunkt-Kennwerten - Teil 1: Mechanische Eigenschaften (ISO 11403-1:2014)

This European Standard was approved by CEN on 7 June 2014.

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Foreword

This document (EN ISO 11403-1:2014) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by December 2014, and conflicting national standards shall be withdrawn at the latest by December 2014.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 ISO 11403-1:2003.

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, 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 the United Kingdom.

Endorsement notice

The text of ISO 11403-1:2014 has been approved by CEN as EN ISO 11403-1:2014 without any modification.

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INTERNATIONAL
STANDARD

ISO
11403-1

Third edition
2014-06-15

**Plastics — Acquisition and
presentation of comparable
multipoint data —**

**Part 1:
Mechanical properties**

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*Plastiques — Acquisition et présentation de données multiples
comparables —
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Partie 1: Propriétés mécaniques*

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ISO 11403-1:2014(E)

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. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 2, *mechanical properties*.

This third edition cancels and replaces the second edition (ISO 11403-1:2001), which has been technically revised. The main changes are as follows:

- Annex A was deleted;
- ISO 3167 was deleted and ISO 20753 was added in the [Clause 2](#), Normative references.

ISO 11403 consists of the following parts, under the general title *Plastics — Acquisition and presentation of comparable multipoint data*:

- *Part 1: Mechanical properties*
- *Part 2: Thermal and processing properties*
- *Part 3: Environmental influences on properties*

Introduction

This International Standard has been prepared because users of plastics find sometimes that available data cannot be used readily to compare the properties of similar materials, especially when the data have been supplied by different sources. Even when the same standard tests have been used, they often allow the adoption of a wide range of alternative test conditions, and the data obtained are not necessarily comparable. The purpose of this International Standard is to identify specific methods and conditions of test to be used for the acquisition and presentation of data in order that valid comparisons between materials can be made.

ISO 10350 is concerned with single-point data. Such data represent the most basic method for characterizing materials and are useful for the initial stages of material selection. The present International Standard identifies test conditions and procedures for the measurement and presentation of a more substantial quantity of data. Each property here is characterized by multipoint data which demonstrate how that property depends upon important variables such as time, temperature and environmental effects. Additional properties are also considered in this standard. These data therefore enable more discriminating decisions to be made regarding a material's suitability for a particular application. Some data are also considered adequate for undertaking predictions of performance in service and of optimum processing conditions for moulding a component, although it should be recognized that, for purposes of design, additional data will often be needed. One reason for this is that some properties are strongly dependent upon the physical structure of the material. The test procedures referred to in this standard employ, where possible, the multipurpose tensile bar, and the polymer structure in this test specimen may be significantly different from that in specific regions of a moulded component. Under these circumstances, therefore, the data will not be suitable for accurate design calculations for product performance. The material supplier should be consulted for specific information on the applicability of data.

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ISO 10350 and the various parts of this International Standard together define the means for acquiring and presenting a core set of comparable data for use in material selection. Use of these standards should result in a rationalization of effort and a reduction of cost associated with provision of these data. Furthermore, reference to these standards will simplify the development of data models for the computerized storage and exchange of data concerning material properties.

Where appropriate, values for test variables have been specified by this standard. For some tests however, owing to the wide range of conditions over which different plastics perform, the standard gives guidance in the selection of certain test conditions so that they cover the operating range for that polymer. Because, in general, the properties and performance specifications for different polymers differ widely, there is no obligation to generate data under all the test conditions specified in this standard.

Data on a wide range of properties are needed to enable plastics to be selected and used in the large variety of applications to which they are suited. ISO standards describe experimental procedures which are suitable for the acquisition of relevant information on many of these properties. The standard has therefore been divided into parts so that each part can be developed independently. In this way, additional properties can be included as new or revised standards become available.