



**SLOVENSKI STANDARD**  
**SIST EN ISO 29664:2017**  
**01-maj-2017**

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**Polimerni materiali - Umetno vremensko staranje, vključno s kislinškimi usedlinami (ISO 29664:2010)**

Plastics - Artificial weathering including acidic deposition (ISO 29664:2010)

Kunststoffe - Künstliche Bewitterung einschließlich saurer Beanspruchung (ISO 29664:2010)

Plastiques - Vieillissement artificiel y compris les dépôts acides (ISO 29664:2010)

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**Ta slovenski standard je istoveten z: EN ISO 29664:2017**

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**ICS:**

83.080.01	Polimerni materiali na splošno	Plastics in general
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EUROPEAN STANDARD

EN ISO 29664

NORME EUROPÉENNE

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February 2017

ICS 83.080.01

English Version

## Plastics - Artificial weathering including acidic deposition (ISO 29664:2010)

Plastiques - Vieillissement artificiel y compris les  
dépôts acides (ISO 29664:2010)

Kunststoffe - Künstliche Bewitterung einschließlich  
saurer Beanspruchung (ISO 29664:2010)

This European Standard was approved by CEN on 17 January 2017.

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

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

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## European foreword

The text of ISO 29664:2010 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 29664:2017 by 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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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**Plastics — Artificial weathering including  
acidic deposition**

*Plastiques — Vieillissement artificiel y compris les dépôts acides*

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## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 29664 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

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## Introduction

This International Standard specifies methods to reproduce the weathering effects that occur when plastics are exposed to heavily polluted outdoor environments. Acidic precipitation can have a significant effect on the photochemical ageing of many polymers. In some cases, this is due to attack on the stabilizers<sup>[5][6]</sup> or fillers like  $\text{CaCO}_3$ <sup>[7][8]</sup> applied in technical polymers. The mechanisms differ from those of harmful gases, which essentially constitute the initial products of acidic precipitation.

Arising from changing industrial air pollution and additionally diffused by the stochastic wind and cloud distribution, acidic precipitation occurs sporadically. Thus, especially regarding acidic precipitation, outdoor weathering effects vary enormously within different years. Therefore, it is practically impossible to obtain reliable outdoor exposure results from just one season. These fluctuations can be avoided through the use of a laboratory test, where all weathering parameters, including the acidic deposition, can be controlled.

In artificial weathering tests for plastics, the action of acidic atmospheric precipitation, which is part of the real world, has generally not been considered.

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