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Corrosion of metal and alloys - Determination of resistance of magnesium alloys to stress corrosion cracking (ISO 20728:2018)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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Corrosion of metal and alloys - Determination of resistance of magnesium alloys to stress corrosion cracking (ISO 20728:2018)

Corrosion des métaux et alliages - Détermination de la résistance des alliages de magnésium à la fissuration par corrosion sous contrainte (ISO 20728:2018)

Korrosion von Metall und Legierungen - Bestimmung der Beständigkeit von Magnesiumlegierungen gegen Spannungsrisskorrosion (ISO 20728:2018)

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN ISO 20728:2018 (E)

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European foreword

This document (EN ISO 20728:2018) has been prepared by Technical Committee ISO/TC 156 "Corrosion of metals and alloys" in collaboration with Technical Committee CEN/TC 262 "Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys" 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of an identical text or by endorsement, at the latest by April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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Endorsement notice

The text of ISO 20728:2018 has been approved by CEN as EN ISO 20728:2018 without any modification.

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Corrosion of metal and alloys — Determination of resistance of magnesium alloys to stress corrosion cracking

*Corrosion des métaux et alliages — Détermination de la résistance
des alliages de magnésium à la fissuration par corrosion sous
contrainte*



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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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ISO 20728:2018(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 (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 156, *Corrosion of metals and alloys*.

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.

Corrosion of metal and alloys — Determination of resistance of magnesium alloys to stress corrosion cracking

WARNING — This document calls for the use of substances and/or procedures that can be injurious to health if adequate safety measures are not taken. This document does not address any health hazards, safety or environmental matters associated with its use. It is the responsibility of the user of this document to establish appropriate health, safety and environmentally acceptable practices.

1 Scope

This document specifies a method for the determination of resistance to stress corrosion cracking (SCC) of magnesium alloys intended for use in structural applications (such as magnesium front end, gearbox and clutch housing units, steering column parts, shift actuators, valve covers and housings, brackets and intake manifold blades, electronic devices, power tools and medical equipment). The method allows determination of the resistance to SCC as a function of the chemical composition, the method of manufacture and heat treatment of magnesium alloys.

The document is applicable to cast and wrought magnesium alloys in the form of castings, semi-finished products, parts and weldments and covers the method of sampling, the types of specimens, the loading procedure, the type of environment and the interpretation of results.

The document allows assessment of the relative performance of materials and products in environments containing chlorides or sulphates, provided that the failure mechanism is not changed, but does not qualify a material or product for service application.

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 7539-1, *Corrosion of metals and alloys — Stress corrosion testing — Part 1: General guidance on testing procedures*

ISO 7539-4, *Corrosion of metals and alloys — Stress corrosion testing — Part 4: Preparation and use of uniaxially loaded tension specimens*

ISO 7539-7:2005, *Corrosion of metals and alloys — Stress corrosion testing — Part 7: Method for slow strain rate testing*

ISO 8044, *Corrosion of metals and alloys — Basic terms and definitions*

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