
**Magnesium and magnesium alloys —
Magnesium alloys for cast anodes**

*Magnésium et alliages de magnésium — Alliages de magnésium pour
anodes coulées*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2007

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

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 26202 was prepared by the European Committee for Standardization (CEN) (as EN 12438) and was adopted, under a special “fast-track procedure”, by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 5, *Magnesium and alloys of cast or wrought magnesium*, in parallel with its approval by the ISO member bodies.

Contents

	Page		Page
Foreword	3	5.2 Electrochemical testing	6
Introduction	4	6 Rounding of numbers	6
1 Scope	4	Annex A (normative) Test method for the determination of the electrode potential of galvanic anodes	7
2 Normative references	4	Annex B (normative) Test method for the determination of the rate of mass loss of galvanic anodes	9
3 Designations	4	Annex C (informative) List of corresponding international designations and former national designations	12
3.1 Material	4	Annex D (informative) Bibliography	12
3.2 Casting process	4		
4 Requirements	4		
4.1 General	4		
4.2 Chemical composition	4		
5 Testing	6		
5.1 Analysis of chemical composition	6		

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 190 "Foundry technology", the secretariat of which is held by DIN.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 3.10 "Cast magnesium" to prepare the following standard :

EN 12438

Magnesium and magnesium alloys - Magnesium alloys for cast anodes

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 October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

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 document is a preview generated by EVS

Introduction

This European Standard classifies the commercially available magnesium anode alloys into a number of grades suitable for the applications to which they might be put. The annexes A and B describe methods for electrochemical tests with corresponding recommended values. Annex C gives a list of corresponding international designations and former national designations.

1 Scope

This European Standard specifies the chemical composition of magnesium alloy ingots for anodes and chemical composition of magnesium alloy anode castings.

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 1559-1
Founding – Technical conditions of delivery – Part 1: General

EN 1559-5
Founding – Technical conditions of delivery – Part 5: Additional requirements for magnesium alloy castings

ISO 31-0 : 1992
Quantities and units – Part 0: General principles

NOTE: Informative references to documents used in the preparation of this standard, and cited at the appropriate places in the text, are listed in a bibliography, see annex D.

3 Designations

3.1 Material

The material shall be designated either by symbol or by number (see tables 1 and 2).

3.2 Casting process

The following symbols shall be used for the different casting processes:

- S Sand casting;
- K Permanent mould casting (gravity);
- C Continuous casting.

4 Requirements

4.1 General

The requirements for technical delivery conditions given in EN 1559-1 and EN 1559-5 shall apply.

4.2 Chemical composition

The chemical composition of magnesium based alloy ingots for anodes shall conform to the requirements for the appropriate material given in table 1. The chemical composition of magnesium based alloy anode castings shall conform to the requirements for the appropriate material given in table 2.