

BS EN 1559-5:2017



BSI Standards Publication

Founding — Technical conditions of delivery

Part 5: Additional requirements for magnesium alloy castings

National foreword

This British Standard is the UK implementation of EN 1559-5:2017. It supersedes BS EN 1559-5:1998 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/111, Steel Castings and Forgings.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017.
Published by BSI Standards Limited 2017

ISBN 978 0 580 91097 5

ICS 77.150.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2017.

Amendments/corrigenda issued since publication

| Date | Text affected |
|------|---------------|
|------|---------------|

EUROPEAN STANDARD

EN 1559-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 77.150.20

Supersedes EN 1559-5:1997

English Version

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

Fonderie - Conditions techniques de fourniture - Partie
5 : Spécifications complémentaires pour les pièces
moulées en alliages de magnésium

Gießereiwesen - Technische Lieferbedingungen - Teil
5: Zusätzliche Anforderungen an Gussstücke aus
Magnesiumlegierungen

This European Standard was approved by CEN on 6 January 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

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

| Contents | | Page |
|--|--|-----------|
| European foreword | | 3 |
| Introduction | | 4 |
| 1 | Scope | 5 |
| 2 | Normative references | 5 |
| 3 | • Terms and definitions | 5 |
| 4 | Information to be supplied by the purchaser | 6 |
| 5 | Designations | 6 |
| 6 | Manufacture | 7 |
| 7 | Requirements | 7 |
| 8 | Inspection | 8 |
| 9 | • Marking | 9 |
| 10 | • Packaging and surface protection | 9 |
| 11 | • Complaints | 9 |
| Annex A (informative) Significant technical changes between this European standard and the previous edition | | 10 |

European foreword

This document (EN 1559-5:2017) has been prepared by Technical Committee CEN/TC 190 “Foundry Technology”, the secretariat of which is held by DIN.

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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1559-5:1997.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 9 “Cast Magnesium” to revise the following standard:

EN 1559-5:1997, *Founding — Technical conditions of delivery — Part 5: Additional requirements for magnesium alloy castings*

Annex A provides details of significant technical changes between this European Standard and the previous edition.

This standard is one of a series of European Standards for technical delivery conditions for castings. The other standards in this series are:

- EN 1559-1, *Founding — Technical conditions of delivery — Part 1: General*
- EN 1559-2, *Founding — Technical conditions of delivery — Part 2: Additional requirements for steel castings*
- EN 1559-3, *Founding — Technical conditions of delivery — Part 3: Additional requirements for iron castings*
- EN 1559-4, *Founding — Technical conditions of delivery — Part 4: Additional requirements for aluminium alloy castings*
- EN 1559-6, *Founding — Technical conditions of delivery — Part 6: Additional requirements for zinc alloy castings*

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.

Introduction

CEN/TC 190 “Foundry Technology” has prepared material standards covering magnesium alloy castings.

In order to assist manufacturers and purchasers to prepare proper contractual arrangements and prevent misunderstanding, CEN/TC 190 approved the preparation of a series of standards covering technical delivery conditions. These have been prepared as separate parts.

This part of EN 1559 covers the additional technical delivery conditions for magnesium alloy castings, e.g. optional information, manufacturing process, additional requirements regarding the condition of the casting and test methods.

This part of EN 1559 cannot be used alone for compiling a specification for ordering and supplying magnesium alloy castings, but as a complement to EN 1559-1.

The clauses marked with a single dot • indicate that the requirements of the same clauses of EN 1559-1 have to be met.

1 Scope

This part of EN 1559 specifies the additional technical delivery conditions for castings (see EN 1753) and cast anodes (see EN 12438) made from magnesium alloys.

This part of EN 1559 applies to magnesium alloy castings produced in sand or permanent moulds or by pressure die casting, centrifugal casting, continuous casting or investment casting.

This part of EN 1559 does not apply to ingots, bars, billets (or other shapes) for further reprocessing, such as re-melting or extrusion.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1370, *Founding - Examination of surface condition*

EN 1371-1, *Founding - Liquid penetrant testing- Part 1: Sand, gravity die and low pressure die castings*

EN 1371-2, *Founding - Liquid penetrant testing - Part 2: Investment castings*

EN 1559-1:2011, *Founding - Technical conditions of delivery - Part 1: General*

EN 1753, *Magnesium and magnesium alloys - Magnesium alloy ingots and castings*

EN 1754, *Magnesium and magnesium alloys - Designation system for anodes, ingots and castings - Material symbols and material numbers*

EN 12438, *Magnesium and magnesium alloys - Magnesium alloys for cast anodes*

prEN 12681-1, *Founding - Radiographic testing - Part 1: Film techniques*¹

prEN 12681-2, *Founding - Radiographic testing - Part 2: Techniques with digital detectors*²

EN ISO 3452-1, *Non-destructive testing - Penetrant testing - Part 1: General principles (ISO 3452-1)*

EN ISO 5579, *Non-destructive testing - Radiographic testing of metallic materials using film and X- or gamma rays - Basic rules (ISO 5579)*

3 • Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1559-1 and in the applicable material standard apply.

¹) In development.

²) In development.