



BSI Standards Publication

## **Aluminium and aluminium alloys – Castings – Chemical composition and mechanical properties**

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## National foreword

This British Standard is the UK implementation of EN 1706:2020+A1:2021. It supersedes BS EN 1706:2020, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee NFE/35, Light metals and their alloys.

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

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## EUROPÄISCHE NORM

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Supersedes EN 1706:2020

English Version

## Aluminium and aluminium alloys - Castings - Chemical composition and mechanical properties

Aluminium et alliages d'aluminium - Pièces moulées -  
Composition chimique et propriétés mécaniques

Aluminium und Aluminiumlegierungen - Gussstücke -  
Chemische Zusammensetzung und mechanische  
Eigenschaften

This European Standard was approved by CEN on 2 March 2020 and includes Amendment 1 approved by CEN on 1 July 2021.

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## European foreword

This document (EN 1706:2020+A1:2021) has been prepared by Technical Committee CEN/TC 132 "Aluminium and aluminium alloys", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by February 2022, and conflicting national standards shall be withdrawn at the latest by February 2022.

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.

CEN/TC 132 affirms it is its policy that in the case when a patentee refuses to grant licences on standardized products under reasonable and not discriminatory conditions, then this product shall be removed from the corresponding standard.

This document supersedes A1 EN 1706:2020 A1.

A1 *deleted text* A1

This document includes Amendment 1 approved by CEN on 7 June 2021.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

Within its programme of work, Technical Committee CEN/TC 132 entrusted CEN/TC 132/WG 23 "Revision of EN 1676 and EN 1706" to revise EN 1706:2010.

A1 Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website. A1

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## 1 Scope

This document specifies the chemical composition limits for aluminium casting alloys and mechanical properties of separately cast test pieces for these alloys.

Annex C is included as a guide to the selection of alloys for a specific use or process.

This document is intended to be used in conjunction with EN 576, EN 1559-1, EN 1559-4, EN 1676 and EN ISO 8062-3.

## 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.

EN 576, *Aluminium and aluminium alloys — Unalloyed aluminium ingots for remelting — Specifications*

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

EN 1559-4, *Founding — Technical conditions of delivery — Part 4: Additional requirements for aluminium alloy castings*

EN 1780-1, *Aluminium and aluminium alloys — Designation of alloyed aluminium ingots for remelting, master alloys and castings — Part 1: Numerical designation system*

EN 1780-2, *Aluminium and aluminium alloys — Designation of alloyed aluminium ingots for remelting, master alloys and castings — Part 2: Chemical symbol based designation system*

EN 1780-3, *Aluminium and aluminium alloys — Designation of alloyed aluminium ingots for remelting, master alloys and castings — Part 3: Writing rules for chemical composition*

EN ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature (ISO 6892-1)*

EN ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method (ISO 6506-1)*

EN 12258-1:2012, *Aluminium and aluminium alloys — Terms and definitions — Part 1: General terms*