

Specification for

Wrought aluminium and aluminium alloys —

**For general engineering purposes
(Supplementary series) —**

5454 Forging stock and forgings

Co-operating organizations

The Non-ferrous Metals Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Aluminium Federation*	Institution of Mining and Metallurgy
Association of Bronze and Brass Founders	Institution of Production Engineers
Association of Consulting Engineers	Institution of Structural Engineers*
Board of Trade	Lead Development Association
British Bronze and Brass Ingot Manufacturers' Association	Light Metal Founders' Association
British Electrical and Allied Manufacturers' Association*	London Metal Exchange
British Lead Manufacturers' Association	Magnesium Industry Council
British Non-ferrous Metals Federation	Ministry of Defence, Army Department
British Non-ferrous Metals Federation High Conductivity Copper Group	Ministry of Defence, Navy Department*
British Non-ferrous Metals Research Association*	National Brassfoundry Association
Copper Development Association	Non-ferrous metal stockists*
Crown Agents for Oversea Governments and Administrations	Post Office
Electric Cable Makers' Confederation	Royal Institute of British Architects*
Institute of British Foundrymen	Society of British Aerospace Companies
Institute of Metals*	Society of Motor Manufacturers and Traders Ltd.*
Institution of Mechanical Engineers (Automobile Division)*	Tin Research Institute
	Zinc Development Association
	Individual manufacturers

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

ALARS (Association of Light Alloy Refiners and Smelters)	National Federation of Vehicle Trades
Institute of Sheet Metal Engineering	Small Rivet Association
Lloyd's Register of Shipping	Welding Institute
London Transport Board	Institute of Structural Engineers
National Association of Drop Forgers and Stampers	

This British Standard, having been approved by the Non-ferrous Metals Industry Standards Committee, was published under the authority of the Executive Board on 31 December 1969

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Foreword

This standard makes reference to the following British Standards:

BS 18, *Methods for tensile testing of metals*.

BS 18-1, *Non-ferrous metals*.

BS 1499, *Sampling non-ferrous metals*.

BS 1728, *Methods for the analysis of aluminium and aluminium alloys*.

BS 3660, *Glossary of terms used in the wrought aluminium industry*.

This British Standard specification for forging stock and forgings is one of a series of supplementary specifications for wrought aluminium and aluminium alloys, the preparation of which has been authorized by the Non-ferrous Metals Industry Standards Committee. In reflection of the decision of the Government that British industry should effect a complete change to the metric system by 1971, this specification is expressed in metric terms. For the convenience of users however equivalent properties have been cited in tonf/in² units.

Aluminium and aluminium alloy materials intended for general engineering use are the subject of specification in BS 1470–1475 whilst those intended for specialized use or which are of limited interest, are published in the supplementary engineering series. The latter series will be kept under frequent review, and if changed circumstances appear to warrant such, from time to time particular material specifications may be transferred from the supplementary to the general engineering series.

As a major step towards alignment of aluminium and aluminium alloy compositions on an international basis, a substantial number of countries have agreed to adopt a 4-digit classification for alloy composition designation. This system is administered by the Aluminum Association Inc., who issue the “Registration Record of International Alloy Designations and Chemical Composition Limits for Wrought Aluminum Alloys”.

By amendment, it has been decided to introduce this system into the British Standards concerned with these types of material in place of the material designations formerly used. The details of the system are given in Appendix C. The temper designations and associated mechanical property requirements remain unaltered for the present and therefore may not necessarily align precisely with those in the standards of other countries.

The designation 5454 therefore replaces the former designation NF 51 (nearest ISO equivalent Al Mg3 Mn). Minor compositional changes have been made.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 11 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

