

Specification for

**Forging stock, bars,
extruded sections and
forgings of 99 %
aluminium**

UDC 629.7:[669.71-126 + 669.71-134 + 669.71-412]

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Aerospace Standards Committee (ACE/-) to Technical Committee ACE/24 upon which the following bodies were represented:

Aluminium Federation
 Aluminium Stockholders' Association
 Association of Light Alloy Refiners Limited
 BNF Metals Technology Centre
 British Forging Industry Association
 British Industrial Fasteners Federation
 British Investment Casting Trade Association
 Institute of British Foundrymen
 Light Metal Founders' Association
 Magnesium Industry Council
 Ministry of Defence
 Society of British Aerospace Companies Limited

This British Standard, having been prepared under the direction of the Aerospace Standards Committee, was published under the authority of the Board of BSI and comes into effect on 31 December 1985

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The following BSI references relate to the work on this standard:
 Committee reference ACE/24
 Draft for comment 81/77624 DC

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Amendments issued since publication

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NOTE 1 Other forms of material of the same composition are covered by the following British Standards:

BS L 16, *Sheet and strip (Temper designation H14 or H24).*

BS L 17, *Sheet and strip (Temper designation —0).*

BS L 54, *Tube (Cold drawn: seamless: tested hydraulically).*

BS L 116, *Tube (Cold drawn: seamless: not tested hydraulically).*

NOTE 2 The chemical composition of this material complies with that registered as International Designation 1200.

NOTE 3 The title of the publication referred to in this standard is listed on the inside back cover.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 and 2, an inside back cover 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.

1 Inspection and testing procedure

This British Standard shall be used in conjunction with the relevant sections of the latest issue of BS L 100.

2 Quality of material

The material shall be made from aluminium of the chemical composition specified in clause 3, with or without approved scrap at the discretion of the manufacturer.

3 Chemical composition

The chemical composition of the material shall be:

Element	%	
	min.	max.
Silicon plus iron	—	1.00
Copper	—	0.05
Manganese	—	0.05
Zinc	—	0.10
Titanium	—	0.05
Others: each	—	0.05
Others: total	—	0.15
Aluminium^a	99.00	—

^a The aluminium content is the difference between 100.00 % and the sum of all the other metallic elements present in amounts of 0.01 % or more each, expressed to the second decimal place before determining the sum.

4 Condition

4.1 Forging stock. Cast billets and slabs for hot working and extruded bars, sections and hot-rolled plate for forging shall be supplied non-heat-treated.

4.2 Bars and extruded sections. Bars for machining and extruded sections shall be supplied in one of the following conditions:

1) extruded

or 2) extruded and drawn

or 3) rolled and drawn

and subsequently straightened.

NOTE The material may be annealed before or after straightening.

4.3 Forgings. Unless otherwise agreed in accordance with BS L 100, forgings shall be supplied as forged or annealed.

5 Heat treatment

None.

6 Mechanical properties

6.1 Tensile test. Unless they are required by BS L 100 to be fixed by agreement between the manufacturer and the purchaser, the mechanical properties obtained from test pieces selected and prepared in accordance with the relevant requirements of BS L 100 shall be not less than the following values:

Tensile strength	Elongation on gauge length of	
	50 mm	$5.65 \sqrt{S_u}$
MPa	%	%
65	18	20

Publication referred to

BS L 100, *Procedure for inspection and testing of wrought aluminium and aluminium alloys.*

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