

Please be aware that this PDF has been created from the original hardcopy document, which might not be in good condition and so the PDF might reflect this.



Withdrawn 1951 4 and

[5 L. 3. May, 1939.]

(Cancelling B.S. Specification 4 L. 3.)

NOTE.—The Institution desires to call attention to the fact that this Specification is intended to include the technical provisions necessary for the supply of the material herein referred to but does not purport to comprise all the necessary provisions of a contract.

British Standards Institution.

Incorporated by Royal Charter.

FORMED IN 1901 AS THE ENGINEERING STANDARDS COMMITTEE.

INCORPORATED IN 1918 AS THE BRITISH ENGINEERING STANDARDS ASSOCIATION.

BRITISH STANDARD SPECIFICATION

FOR

ALUMINIUM ALLOY SHEETS AND COILS

FOR AIRCRAFT PURPOSES.

(Specific Gravity not greater than 2.85.)

1. **Quality of Material.** (a) The aluminium used for making this alloy shall be in accordance with the latest issue of British Standard L. 31.

(b) The copper used for making this alloy shall assay not less than 99.8 per cent.

(c) No scrap shall be used other than that derived from the Manufacturer's own manufacture.

2. **Chemical Composition.** (a) The chemical composition of the alloy shall be:—

Copper	-	-	not less than 3.5 nor more than 4.5 per cent.
Manganese	-	„	0.4 „ „ „ 0.7 per cent.
Magnesium	-	„	0.4 „ „ „ 0.8 per cent.
Silicon	-	-	not more than 0.7 per cent.
Iron	-	-	„ „ „ 0.7 per cent.
Titanium	-	-	„ „ „ 0.3 per cent.
Aluminium	-	-	the remainder.

(b) The Manufacturer shall supply, when required, the complete analysis of the alloy to the Inspector.

(c) A cast shall be defined as:—

(i) The product of one furnace melt.

(ii) The product of one crucible melt.

(iii) The product of a number of crucible or furnace melts where such are aggregated and mixed prior to casting.

(iv) Where a continuous melting process is employed, a cast shall be taken as the amount of metal tapped from the furnace without any further additions of alloying constituents having been made.

(v) Or as otherwise defined from time to time.

3. **Heat Treatment.** (a) Unless otherwise specified on the order, sheets and coils shall be delivered in the finally heat-treated and aged condition, and in this condition before straightening must comply with the mechanical tests specified in Clause 7.

(b) The sheets and coils shall be finally heat-treated by being heated uniformly to a temperature of 495° C. plus or minus 10° C. and quenched in water or oil; they shall then be aged at room temperature for five days.

All material to be used for aeronautical purposes must give the required mechanical properties after heat-treatment at the temperature specified above. Material for other purposes may be heat-treated at different temperatures from those specified, provided that these temperatures are stated by the Manufacturer on the test certificate. On no account in workshop practice should the temperature be greater than 505° C. owing to the danger of overheating the material and rendering it brittle in consequence.