BRITISH STANDARD AEROSPACE SERIES

BS EN
4100:2005

Aluminium alloy AL-P2219-T6 or T62 — Sheet and strip — 0,5 mm ≤ a ≤ 6 mm

The European Standard EN 4100:2005 has the status of a British Standard

ICS 49.025.20

BSI
British Standards

National foreword

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The UK participation in its preparation was entrusted by Technical Committee ACE/61, Metallic materials for aerospace purposes, to Subcommittee ACE/61/-/24, Light alloys, which has the responsibility to:

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 6, an inside back cover and a back cover.

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EUROPÄISCHE NORM

EN 4100

June 2005

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English version

Aerospace series - Aluminium alloy AL-P2219-T6 or T62 - Sheet and strip - 0,5 mm ≤a ≤6 mm

Série aérospatiale - Alliage d'aluminium AL-P2219-T6 ou T62 - Tôles et bandes - 0,5 mm ≤a ≤6 mm

Luft- und Raumfahrt - Aluminiumlegierung AL-P2219-T6 oder T62 - Bleche und Bänder - 0,5 mm ≤a ≤6 mm

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 4100:2005: E

Foreword

This document (EN 4100:2005) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

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of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

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Introduction

This standard is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

This standard has been prepared in accordance with EN 4500-2.

1 Scope

This standard specifies the requirements relating to:

Aluminium alloy AL-P2219-
T6 or T62
Sheet and strip
0,5 mm ≤ *a* ≤ 6 mm

for aerospace application.

2 Normative references

The following referenced documents are indispensable for the application 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 4258, *Aerospace series — Metallic materials — General organization of standardization — Links between types of EN standards and their use.*

EN 4400-2, *Aerospace series — Aluminium and aluminium alloy wrought products — Technical specification — Part 2: Sheet and strip.* [1)]

EN 4500-2, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 2: Specific rules for aluminium, aluminium alloys and magnesium alloys.* [1)]

1) Published as AECMA Prestandard at the date of publication of this standard.

1	Material designation		Aluminium alloy AL-P2219-										
2	Chemical composition %	Element	Si	Fe	Cu	Mn	Mg	Zn	Ti	V	Zr	Others	Al
												Each / Total	
		min.	–	–	5,8	0,20	–	–	0,02	0,05	0,10	– / –	Base
		max.	0,20	0,30	6,8	0,40	0,02	0,10	0,10	0,15	0,25	0,05 / 0,15	

3	Method of melting		–
4.1	Form		Sheet and strip
4.2	Method of production		Rolled
4.3	Limit dimension(s)	mm	$0,5 \le a \le 6$
5	Technical specification		EN 4400-2

6.1	Delivery condition	O	H111	T6
	Heat treatment	–	–	Delivery condition + 530 °C ≤ θ ≤ 540 °C / WQ θ ≤ 40 °C + 185 °C ≤ θ ≤ 196 °C / 30 h ≤ t ≤ 40 h
6.2	Delivery condition code	A	F	U
7	Use condition	T62		T6
	Heat treatment	Delivery condition + 530 °C ≤ θ ≤ 540 °C / WQ θ ≤ 40 °C + 185 °C ≤ θ ≤ 196 °C / 30 h ≤ t ≤ 40 h		Delivery condition

Characteristics

8.1	Test sample(s)				See EN 4400-2.		
8.2	Test piece(s)				See EN 4400-2.		
8.3	Heat treatment				Delivery condition: O or H111	Use condition: T6 or T62	
9	Dimensions concerned			mm	$0,5 \le a \le 6$	$0,5 \le a \le 1,0$	$1,0 < a \le 6$
10	Thickness of cladding on each face			%	–	–	–
11	Direction of test piece				LT	LT	LT
12	T	Temperature	θ	°C	Ambient	Ambient	Ambient
13	T	Proof stress	$R_{p0,2}$	MPa	≤ 110	≥ 250	≥ 250
14	T	Strength	R_m	MPa	≤ 220	≥ 375	≥ 375
15	T	Elongation	A	%	$A_{50\ mm} \ge 12$	$A_{50\ mm} \ge 6$	$A_{50\ mm} \ge 7$
16	T	Reduction of area	Z	%	–		
17	Hardness				–		
18	Shear strength		R_c	MPa	–		
19	Bending		k	–	–		
20	Impact strength				–		
21	C	Temperature	θ	°C	–		
22	C	Time		h	–		
23	C	Stress	σ_a	MPa	–		
24	C	Elongation	a	%	–		
25	C	Rupture stress	σ_R	MPa	–		
26	C	Elongation at rupture	A	%	–		
27	Notes (see line 98)				–		

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<tr><td rowspan="2">Hardness</td><td rowspan="2">HB</td><td colspan="2">105 (Typical value)</td></tr>
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100	–	Product qualification	–	See EN 4400-2.
				Qualification programme to be agreed between manufacturer and purchaser.

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