SLOVENSKI STANDARD
SIST EN 3474:2005

01-november-2005

Aerospace series - Aluminium alloy AL-P2024-T81 - Sheet and strip - 0,25 mm <a <6 mm

Aerospace series - Aluminium alloy AL-P2024-T81 - Sheet and strip - 0,25 mm <a <6 mm

Luft- und Raumfahrt - Aluminiumlegierung AL-P2024-T81 - Bleche und Bänder - 0,25 mm <a <6 mm

Série aérospatiale - Alliage d'aluminium AL-P2024-T81 - Tôles et bandes - 0,25 mm <a <6 mm

Ta slovenski standard je istoveten z: **EN 3474:2005**

ICS:

49.025.20	Aluminij	Aluminium

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EUROPEAN STANDARD

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English version

Aerospace series - Aluminium alloy AL-P2024-T81 - Sheet and strip - 0,25 mm ≤a ≤6 mm

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This European Standard was approved by CEN on 22 April 2005.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 3474:2005) 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of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.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-P2024-
T81
Sheet and strip
0,25 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-P2024-										
2	Chemical composition %	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
											Each	Total	
		min.	–	–	3,8	0,30	1,2	–	–	–	–	–	Base
		max.	0,50	0,50	4,9	0,9	1,8	0,10	0,25	0,15	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	$0,25 \leq a \leq 6$										
5	Technical specification		EN 4400-2										

6.1	Delivery condition	T31	T81
	Heat treatment	490 °C ≤ θ ≤ 500 °C / WQ θ ≤ 40 °C + approximately 1 % cold work + θ = ambient / t ≥ 5 d	490 °C ≤ θ ≤ 500 °C / WQ θ ≤ 40 °C + approximately 1 % cold work + 185 °C ≤ θ ≤ 195 °C / 10 h ≤ t ≤ 14 h
6.2	Delivery condition code	K	U
7	Use condition	T81	T81
	Heat treatment	Delivery condition + 185 °C ≤ θ ≤ 195 °C / 10 h ≤ t ≤ 14 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				Use condition
9	Dimensions concerned			mm	$0,25 \leq a \leq 6$
10	Thickness of cladding on each face			%	–
11	Direction of test piece				LT
12	T	Temperature	θ	°C	Ambient
13	T	Proof stress	$R_{p0,2}$	MPa	≥ 400
14	T	Strength	R_m	MPa	≥ 460
15	T	Elongation	A	%	$A_{50\ mm} \geq 5$
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)				–

44	External defects	–	See EN 4400-2.				
82	Batch uniformity	–	See EN 4400-2.				
		5				T31	T81
		7	Electrical conductivity	γ	MS/m	17,5 (Typical value)	23,0 (Typical value)
		or					
		7	Hardness	HB		125 (Typical value)	140 (Typical value)
						δ ≤ 16 per product	δ ≤ 20 per product
						Δ ≤ 24 per batch	Δ ≤ 30 per batch
95	Marking inspection	–	See EN 4400-2.				
96	Dimensional inspection	–	See EN 4400-2.				
98	Notes	–	–				
99	Typical use	–	–				

100	–	Product qualification	–	See EN 4400-2.
				Qualification programme to be agreed between manufacturer and purchaser.