SLOVENSKI STANDARD
SIST EN 4212:2005

01-november-2005

Aerospace series - Aluminium alloy AL-P5086-H111 - Plate - 6 mm <a <80 mm

Aerospace series - Aluminium alloy AL-P5086-H111 - Plate - 6 mm <a <80 mm

Luft- und Raumfahrt - Aluminiumlegierung AL-P5086-H111 - Platten - 6 mm <a <80 mm

Série aérospatiale - Alliage d'aluminium AL-P5086-H111 - Tôles épaisses - 6 mm <a <80 mm

Ta slovenski standard je istoveten z: EN 4212:2005

ICS:

49.025.20	Aluminij	Aluminium

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EUROPEAN STANDARD

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EN 4212

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English version

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

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

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Foreword

This document (EN 4212:2005) 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of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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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-P5086-
H111
Plate
6 mm < $a \leq$ 80 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 4400-1, *Aerospace series — Aluminium and aluminium alloy wrought products — Technical specification — Part 1: Plate.* [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-P5086-										
2	Chemical composition %	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
											Each	Total	
		min.	–	–	–	0,20	3,5	0,05	–	–	–	–	Base
		max.	0,40	0,50	0,10	0,7	4,5	0,25	0,25	0,15	0,05	0,15	
3	Method of melting		–										
4.1	Form		Plate										
4.2	Method of production		Rolled										
4.3	Limit dimension(s)	mm	$6 < a \leq 80$										
5	Technical specification		EN 4400-1										

6.1	Delivery condition	H111
	Heat treatment	–
6.2	Delivery condition code	U
7	Use condition	H111
	Heat treatment	Delivery condition

					Characteristics	
8.1	Test sample(s)				See EN 4400-1.	
8.2	Test piece(s)				See EN 4400-1.	
8.3	Heat treatment				Delivery condition	
9	Dimensions concerned			mm	$6 < a \leq 12,5$	$12,5 < a \leq 80$
10	Thickness of cladding on each face			%	–	–
11	Direction of test piece				LT	LT
12	T	Temperature	θ	°C	Ambient	Ambient
13		Proof stress	$R_{p0,2}$	MPa	≥ 100	≥ 100
14		Strength	R_m	MPa	≥ 240	≥ 240
15		Elongation	A	%	$A_{50\ mm} \geq 17$	≥ 16
16		Reduction of area	Z	%	–	–
17	Hardness				–	–
18	Shear strength		R_c	MPa	–	–
19	Bending		k	–	1,5 ; $\alpha = 180°$	–
20	Impact strength				–	
21	C	Temperature	θ	°C	–	
22		Time		h	–	
23		Stress	σ_a	MPa	–	
24		Elongation	a	%	–	
25		Rupture stress	σ_R	MPa	–	
26		Elongation at rupture	A	%	–	
27	Notes (see line 98)				–	

44	External defects	–	See EN 4400-1.
95	Marking inspection	–	See EN 4400-1.
96	Dimensional inspection	–	See EN 4400-1.
98	Notes	–	–
99	Typical use	–	–

100	–	Product qualification	–	See EN 4400-1.
				Qualification programme to be agreed between manufacturer and purchaser.