



SLOVENSKI STANDARD

SIST EN 2126:2001

01-januar-2001

Aerospace series - Aluminium alloy AL-P7075-T651 - Plates 6 mm < a < or = 80 mm

Aerospace series - Aluminium alloy AL-P7075-T651 - Plates 6 mm < a < or = 80 mm

Luft- und Raumfahrt - Aluminiumlegierung AL-P7075-T651 - Platten 6 mm < a < oder = 80 mm

Série aérospatiale - Alliage d'aluminium AL-P7075-T651 - Tôles épaisses 6 mm < a < ou = 80 mm

Ta slovenski standard je istoveten z: EN 2126:1992

SIST EN 2126:2001
<https://standards.iteh.ai/catalog/standards/sist/746529dc-b85d-426c-a20e-2234d0e92520/sist-en-2126-2001>

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Aluminij

Aluminium

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en

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EUROPEAN STANDARD
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EUROPÄISCHE NORM

EN 2126

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Key words : Aircraft industry, metal plates, aluminium alloys, specifications, chemical composition, dimensions, characteristics

English version

**Aerospace series
Aluminium alloy AL-P7075-
T651
Plates
 $6 \text{ mm} < a \leq 80 \text{ mm}$**

**Série aéronautique
Alliage d'aluminium AL-P7075-
T651**

**Tôles épaisses
 $6 \text{ mm} < a \leq 80 \text{ mm}$**

**Luft- und Raumfahrt
Aluminiumlegierung AL-P7075-
T651**

**Platten
 $6 \text{ mm} < a \leq 80 \text{ mm}$**

SIST EN 2126:2001

This European Standard was accepted by CEN on 1992-03-09. CEN members are bound to comply with the requirements of CEN Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat : Rue de Stassart, 36, B-1050 Bruxelles

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively 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 March 1993, and conflicting national standards shall be withdrawn at the latest by March 1993.

In accordance with the Common CEN/CENELEC Rules the following countries are bound to implement this European Standard : Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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0 Introduction

For the use of this standard, see EN 2500-2.

1 Scope

This standard specifies the requirements relating to plates in aluminium alloy AL-P7075-, for use in the T651 condition, $6 \text{ mm} < a \leq 80 \text{ mm}$, for aerospace applications.

2 References

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 2070-2 Aerospace series - Aluminium and aluminium alloy wrought products - Technical specification - Part 2 - Sheet, strip, formed profiles and plate

EN 2131 Plates in aluminium alloys - Thickness $6 \text{ mm} < a \leq 140 \text{ mm}$ - Dimensions - Aerospace series ¹⁾

EN 2500-2 Aerospace series - Instructions for the drafting and use of metallic material standards - Part 2 - Specific requirements for aluminium, aluminium alloys and magnesium alloys ²⁾

EN 2600 Aerospace series - Designation of metallic semi-finished products - Rules ²⁾.

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

2) Published as AECMA pre-standard at the date of publication of this standard.

1	Material designation			Aluminium alloy AL-P7075-													
2	Chemical composition %	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al				
		min.	-	-	1,2	-	2,1	0,18	5,1	-	-	-	-	Base			
max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20	0,05	0,15							
3	Method of melting			-													
4	Form Method of production Limit dimensions (mm)			Plate Hot rolled $6 < a \leq 80$													
5	5.1 Technical specification			EN 2070-2													
	5.2 Dimensional standards			EN 2131													
6	6.1 Delivery condition and heat treatment			W51 $460^{\circ}\text{C} \leq \theta \leq 500^{\circ}\text{C} / \text{WQ } \theta \leq 40^{\circ}\text{C}$ $+ 1,5 \% \leq \text{stretched} \leq 3 \%$					T651 $460^{\circ}\text{C} \leq \theta \leq 500^{\circ}\text{C} / \text{WQ } \theta \leq 40^{\circ}\text{C}$ $+ 1,5 \% \leq \text{stretched} \leq 3 \%$ $+ 115^{\circ}\text{C} \leq \theta \leq 125^{\circ}\text{C} / 20 \text{ h} \leq t \leq 30 \text{ h}$ or $125^{\circ}\text{C} \leq \theta \leq 135^{\circ}\text{C} / 12 \text{ h} \leq t \leq 16 \text{ h}$								
	6.2 Delivery condition code			W					U								
7	Use condition and heat treatment			T651													
				Delivery condition $+ 115^{\circ}\text{C} \leq \theta \leq 125^{\circ}\text{C} / 20 \text{ h} \leq t \leq 30 \text{ h}$ or $125^{\circ}\text{C} \leq \theta \leq 135^{\circ}\text{C} / 12 \text{ h} \leq t \leq 16 \text{ h}$					Delivery condition								
Characteristics (standards.iteh.ai)																	
8	Sample Test piece Heat treatment			Use condition: T651													
9	Dimensions concerned		mm	$6 < a \leq 10$		$10 < a \leq 25$		$25 < a \leq 40$		$40 < a \leq 60$		$60 < a \leq 80$					
10	Thickness of cladding on each face		%	$2234d0e92520/sist-en-2126-2001$													
11	Direction of test piece			L ¹⁾	LT	L ¹⁾	LT	L ¹⁾	LT	ST ²⁾	L ¹⁾	LT	ST	L ¹⁾	LT	ST	
12	T	Temperature	θ	$^{\circ}\text{C}$	Ambient temperature												
13		Proof stress	$R_{p0,2}$	MPa	≥ 470	≥ 460	≥ 470	≥ 475	≥ 470	≥ 460	≥ 420	≥ 455	≥ 440	≥ 405	≥ 430	≥ 420	≥ 390
14		Strength	R_m	MPa	≥ 530	≥ 530	≥ 530	≥ 530	≥ 530	≥ 530	≥ 490	≥ 520	≥ 520	≥ 480	≥ 490	≥ 490	≥ 470
15		Elongation	A	%	$\geq 8^{3)}$	$\geq 8^{3)}$	≥ 6	≥ 6	≥ 6	≥ 5	$\geq 2,5^{4)}$	≥ 6	≥ 5	$\geq 2^{5)}$	≥ 5	≥ 5	$\geq 2^{5)}$
16		Reduction of area	Z	%	-												
17	Hardness			-													
18	Shear strength		R_c	MPa	-												
19	Bending		k	-	-												
20	Impact strength			-													
21	C	Temperature	θ	$^{\circ}\text{C}$	-												
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)			1), 2), 3), 4), 5)													

44	External defects	-	See EN 2070-2	
61	Internal defects	-	See EN 2070-2	
82	Batch uniformity	1	See EN 2070-2	
		7	Electrical conductivity	$\gamma = 19 \text{ MS/m}$ (typical value)