Lennunduse ja kosmonautika seeria. Alumiiniumisulam AL-P7075-T6 või T62. Plakeeritud leht ja riba 0,4 mm ≤ a ≤ 6 mm

Aerospace series - Aluminium alloy AL-P7075-T6 or T62 - Clad sheet and strip 0,4 mm ≤ a ≤ 6 mm

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 2092:2005 sisaldab Euroopa standardi EN 2092:2005 ingliskeelset teksti. Käesolev dokument on jõustatud 29.08.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 2092:2005 consists of the English text of the European standard EN 2092:2005. This document is endorsed on 29.08.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard specifies the requirements relating to: Aluminium alloy AL-P7075- T6 or T62 Clad sheet and strip 0,4 mm ≤ a ≤ 6 mm for aerospace application.	**Scope:** This standard specifies the requirements relating to: Aluminium alloy AL-P7075- T6 or T62 Clad sheet and strip 0,4 mm ≤ a ≤ 6 mm for aerospace application.

ICS 49.025.20

Võtmesõnad: alumiiniumisulamid, lennukitööstus, metallplaadid, mõõtmed, tehnilised andmed, terasribad

EUROPEAN STANDARD

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EN 2092

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English version

Aerospace series - Aluminium alloy AL-P7075-T6 or T62 - Clad sheet and strip - 0,4 mm ≤a ≤6 mm

Série aérospatiale - Alliage d'aluminium AL-P7075-T6 ou T62 - Tôles et bandes plaquées - 0,4 mm ≤a ≤6 mm

Luft- und Raumfahrt - Aluminiumlegierung AL-P7075-T6 oder T62 - Bleche und Bänder, plattiert - 0,4 mm ≤a ≤6 mm

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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Ref. No. EN 2092:2005: E

Foreword

This document (EN 2092:2005) 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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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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-P7075-
T6 or T62
Clad sheet and strip
0,4 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-P7075-									
2	Chemical composition %	Element	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others	Al
											Each / Total	
		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		–									
4.1	Form		Clad sheet and strip									
4.2	Method of production		Rolled									
4.3	Limit dimension(s)	mm	$0,4 \le a \le 6$									
5	Technical specification		EN 4400-2									

6.1	Delivery condition	F	O	T6	T6
	Heat treatment	–	–	460 °C ≤ θ ≤ 485 °C / WQ θ ≤ 40 °C + 115 °C ≤ θ ≤ 135 °C / 20 h ≤ t ≤ 30 h	460 °C ≤ θ ≤ 485 °C / WQ θ ≤ 40 °C + 115 °C ≤ θ ≤ 135 °C / 20 h ≤ t ≤ 30 h
6.2	Delivery condition code	F	A	P	U
7	Use condition	T62			T6
	Heat treatment	Delivery condition + 460 °C ≤ θ ≤ 485 °C / WQ θ ≤ 40 °C + 115 °C ≤ θ ≤ 135 °C / 20 h ≤ t ≤ 30 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			Use condition: T6 or T62				
9	Dimensions concerned		mm	$0,4 \le a \le 1,6$	$1,6 < a \le 3,2$	$3,2 < a \le 6$	$0,4 \le a \le 0,8$	$0,8 < a \le 1,6$	$1,6 < a \le 3,2$	$3,2 < a \le 6$	
10	Thickness of cladding on each face		%	≥ 3,2	≥ 2	≥ 1,2	≥ 3,2	≥ 3,2	≥ 2	≥ 1,2	
11	Direction of test piece			LT	LT	LT	LT	LT	LT	LT	
12	T	Temperature	θ	°C	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient
13	T	Proof stress	$R_{p0,2}$	MPa	≤ 140	≤ 140	≤ 145	≥ 420	≥ 435	≥ 440	≥ 450
14	T	Strength	R_m	MPa	≤ 250	≤ 260	≤ 270	≥ 490	≥ 495	≥ 505	≥ 515
15	T	Elongation	A	%	A_{50mm} ≥ 10	A_{50mm} ≥ 10	A_{50mm} ≥ 10	A_{50mm} ≥ 7	A_{50mm} ≥ 8	A_{50mm} ≥ 8	A_{50mm} ≥ 8
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)			–							