

**Aerospace series –  
Aluminium alloy AL-P2024-T42 –  
Plate – 6 mm < a ≤ 140 mm**

Europastandarden EN 4247:2005 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 4247:2005.

The European Standard EN 4247:2005 has the status of a Swedish Standard. This document contains the official English version of EN 4247:2005.

---

Uppllysningar om **sakinnehållet** i standarden lämnas av SIS, Swedish Standards Institute, telefon 08 - 555 520 00.

Standarder kan beställas hos SIS Förlag AB som även lämnar **allmänna uppllysningar** om svensk och utländsk standard.

*Postadress:* SIS Förlag AB, 118 80 STOCKHOLM

*Telefon:* 08 - 555 523 10. *Telefax:* 08 - 555 523 11

*E-post:* [sis.sales@sis.se](mailto:sis.sales@sis.se). *Internet:* [www.sis.se](http://www.sis.se)

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 4247**

June 2005

ICS 49.025.20

English version

**Aerospace series - Aluminium alloy AL-P2024-T42 - Plate - 6  
mm  $<a \leq 140$  mm**

Série aérospatiale - Alliage d'aluminium AL-P2024-T42 -  
Tôles épaisses - 6 mm  $<a \leq 140$  mm

Luft- und Raumfahrt - Aluminiumlegierung AL-P2024-T42 -  
Platten - 6 mm  $<a \leq 140$  mm

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

CEN members are bound to comply with the CEN/CENELEC 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 Central Secretariat or to any CEN member.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## EN 4247:2005 (E)

### Foreword

This document (EN 4247:2005) 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.

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-P2024-  
T42  
Plate  
 $6 \text{ mm} < a \leq 140 \text{ mm}$

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.*<sup>1)</sup>

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.*<sup>1)</sup>

---

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

EN 4247:2005 (E)

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	–	–	–	–	–	–
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		Plate										
4.2	Method of production		Rolled										
4.3	Limit dimension(s)	mm	6 < a ≤ 140										
5	Technical specification		EN 4400-1										

6.1	Delivery condition		F									
	Heat treatment		–									
6.2	Delivery condition code		F									
7	Use condition		T42									
	Heat treatment		Delivery condition + 490 °C ≤ θ ≤ 500 °C / WQ θ ≤ 40 °C + θ = ambient / t ≥ 5 d									

Characteristics

8.1	Test sample(s)		See EN 4400-1.									
8.2	Test piece(s)		See EN 4400-1.									
8.3	Heat treatment		Use condition.									
9	Dimensions concerned	mm	6 < a ≤ 12,5	12,5 < a ≤ 25	25 < a ≤ 50	50 < a ≤ 100	100 < a ≤ 140					
10	Thickness of cladding on each face	%	–	–	–	–	–					
11	Direction of test piece		LT	LT	LT	LT	LT					
12	Temperature	θ °C	Ambient	Ambient	Ambient	Ambient	Ambient					
13	T	Proof stress	R <sub>p0,2</sub> MPa	≥ 260	≥ 260	≥ 255	≥ 255	≥ 245				
14		Strength	R <sub>m</sub> MPa	≥ 420	≥ 410	≥ 400	≥ 390	≥ 380				
15		Elongation	A %	A <sub>50 mm</sub> ≥ 12	≥ 12	≥ 9	≥ 8	≥ 7				
16	Reduction of area	Z %	–									
17	Hardness		–									
18	Shear strength	R <sub>c</sub> MPa	–									
19	Bending	k –	–									
20	Impact strength		–									
21	C	Temperature	θ °C	–								
22		Time	h	–								
23		Stress	σ <sub>a</sub> MPa	–								
24		Elongation	a %	–								
25		Rupture stress	σ <sub>R</sub> MPa	–								
26		Elongation at rupture	A %	–								
27		Notes (see line 98)		–								