



**SLOVENSKI STANDARD**  
**oSIST prEN 4287:2021**  
**01-november-2021**

---

**Aeronavtika - Aluminijeva zlitina AL-P7010 - Material za kovanje**

Aerospace series - Aluminium alloy AL-P7010 - Forging stock

Luft- und Raumfahrt - Aluminiumlegierung AL-P7010 - Schmiedevormaterial

Série aérospatiale - Alliage d'aluminium AL-P7010 - Produits destinés à la forge

**Ta slovenski standard je istoveten z: prEN 4287**

[oSIST prEN 4287:2021](https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021)

<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021>

**ICS:**

49.025.20      Aluminij                                      Aluminium

**oSIST prEN 4287:2021**                                      **en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[oSIST prEN 4287:2021](#)

<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 4287**

September 2021

ICS 49.025.20

Will supersede EN 4287:2005

English Version

## Aerospace series - Aluminium alloy AL-P7010 - Forging stock

Série aérospatiale - Alliage d'aluminium AL-P7010 -  
Produits destinés à la forge

Luft- und Raumfahrt - Aluminiumlegierung AL-P7010 -  
Schmiedevormaterial

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee ASD-STAN.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266->

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning** : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Requirements</b> .....	<b>5</b>
<b>Bibliography</b> .....	<b>9</b>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[oSIST prEN 4287:2021](https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021)  
<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021>

## European foreword

This document (prEN 4287:2021) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD-STAN, prior to its presentation to CEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 4287:2005.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[oSIST prEN 4287:2021](https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021)

<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021>

**prEN 4287:2021 (E)**

## **Introduction**

This document 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 document has been prepared in accordance with EN 4500-002.

## **iTeh STANDARD PREVIEW (standards.iteh.ai)**

[oSIST prEN 4287:2021](#)

<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021>

## 1 Scope

This document specifies the requirements relating to:

Aluminium alloy AL-P7010

Forging stock

for aerospace applications.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 4400-6, *Aerospace series - Aluminium and aluminium- and magnesium- alloys - Technical specification - Part 6: Aluminium alloy forging stock*

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Requirements

See Table 1.

oSIST prEN 4287:2021  
<https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021>

Table 1 — Requirements for Aluminium alloy AL-P7010-

1	Material designation		Aluminium alloy AL-P7010-												
2	Chemical composition %	Element	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Zr	Ti	Others		Al
		min.	—	—	1,5	—	2,1	—	—	5,7	0,10	—	—	—	
		max.	0,12	0,15	2,0	0,10	2,6	0,05	0,05	6,7	0,16	0,06	0,05	0,15	
3	Method of melting		—												
4.1	Form		Ingot or billet				Rod, bar or section				Plate				
4.2	Method of production		Cast				Extruded				Hot rolled				
4.3	Limit dimension(s)	mm	$a$ or $D \leq 1\ 000$				$a$ or $D \leq 400$				$a \leq 400$				
5	Technical specification		EN 4400-6				EN 4400-6				EN 4400-6				

6.1	Delivery condition		03				F				F				
	Heat treatment		—				—				—				
6.2	Delivery condition code		U				U				U				
7	Use condition		03				F				F				
	Heat treatment		Delivery condition				Delivery condition				Delivery condition				

## Characteristics

8.1	Test sample(s)		See EN 4400-6				See EN 4400-6				See EN 4400-6						
8.2	Test piece(s)		See EN 4400-6				See EN 4400-6				See EN 4400-6						
8.3	Heat treatment		T74 (see line 29)				T74 (see line 29)				T74 (see line 29)						
9	Dimensions concerned	mm	See EN 4400-6				See EN 4400-6				See EN 4400-6						
10	Thickness of cladding on each face	%	—				—				—						
11	Direction of test piece		L				L				L						
12	Temperature	$\theta$	°C		Ambient				Ambient				Ambient				
13	Proof stress	$R_{p0,2}$	MPa		$\geq 435^a$				$\geq 435^a$				$\geq 435^a$				
14	Strength	$R_m$	MPa		$\geq 495^a$				$\geq 495^a$				$\geq 495^a$				
15	Elongation	$A$	%		$\geq 9^a$				$\geq 9^a$				$\geq 9^a$				
16	Reduction of area	$Z$	%		—				—				—				
17	Hardness		—				—				—						
18	Shear strength	$R_c$	MPa		—				—				—				
19	Bending	$k$	—		—				—				—				
20	Impact strength		—				—				—						
21	Temperature	$\theta$	°C		—				—				—				
22	Time		h		—				—				—				
23	Stress	$\sigma_a$	MPa		—				—				—				
24	Elongation	$a$	%		—				—				—				
25	Rupture stress	$\sigma_R$	MPa		—				—				—				
26	Elongation at rupture	$A$	%		—				—				—				
27	Notes (see line 98)		a				a				a						



29	Reference heat treatment	—	Forged test pieces (cast stock, extruded stock or plate) or delivery condition (extruded stock) +470 °C ≤ $\theta$ ≤ 480 °C / WQ $\theta$ ≤ 80 °C +110 °C ≤ $\theta$ ≤ 120 °C / 8 h ≤ $t$ ≤ 24 h +170 °C ≤ $\theta$ ≤ 180 °C / 8 h ≤ $t$ ≤ 16 h
44	External imperfections (visual testing – VT)	—	See EN 4400-6
61	Internal imperfections	—	See EN 4400-6
87	Back-end imperfections	—	See EN 4400-6
		3	Extruded forging stock
		7	See EN 4400-6
88	Peripheral coarse grain	—	See EN 4400-6
		3	Extruded forging stock
		7	Level A
<p><b>iTeh STANDARD PREVIEW</b> (standards.iteh.ai)</p> <p>oSIST prEN 4287:2021 <a href="https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021">https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021</a></p>			
95	Marking inspection	—	See EN 4400-6
96	Dimensional inspection	—	See EN 4400-6
98	Notes	—	<sup>a</sup> The “capability clause” may apply.
99	Typical use	—	

## prEN 4287:2021 (E)

100	—	Product qualification	—	See EN 4400-6
				Qualification programme to be agreed between the manufacturer and purchaser.
<p><b>iTeh STANDARD PREVIEW</b> <b>(standards.iteh.ai)</b></p> <p>oSIST prEN 4287:2021 <a href="https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021">https://standards.iteh.ai/catalog/standards/sist/61f2ebd3-9c02-41bf-8266-c84bff15ed07/osist-pren-4287-2021</a></p>				