



# SLOVENSKI STANDARD

## SIST EN 2540:2018

01-oktober-2018

---

**Aeronavtika - Jeklo X7CrNiAl17-7 (1.4568) - Taljeno - Obdelano v raztopini in utrjeno - Pločevina in trakovi -  $a \leq 6 \text{ mm}$  -  $1\,240 \text{ MPa} \leq R_m \leq 1\,450 \text{ MPa}$**

Aerospace series - Steel X7CrNiAl17-7 (1.4568) - Air melted - Solution treated and precipitation hardened - Sheet and strip -  $a \leq 6 \text{ mm}$  -  $1\,240 \text{ MPa} \leq R_m \leq 1\,450 \text{ MPa}$

Luft- und Raumfahrt - Stahl X7CrNiAl17-7 (1.4568) - Lufterschmolzen - Lösungsgeglüht und ausgelagert - Bleche und Bänder -  $a \leq 6 \text{ mm}$  -  $1\,240 \text{ MPa} \leq R_m \leq 1\,450 \text{ MPa}$

Série aérospatiale - Acier X7CrNiAl17-7 (1.4568) - Élaboré à l'air - Mis en solution et durci par précipitation - Tôles et bande -  $a \leq 6 \text{ mm}$  -  $1\,240 \text{ MPa} \leq R_m \leq 1\,450 \text{ MPa}$

<https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018>

**Ta slovenski standard je istoveten z: EN 2540:2018**

---

**ICS:**

49.025.10      Jekla      Steels

**SIST EN 2540:2018**      en,fr,de

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

SIST EN 2540:2018

<https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018>

EUROPEAN STANDARD

EN 2540

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2018

ICS 49.025.10

English Version

**Aerospace series - Steel X7CrNiAl17-7 (1.4568) - Air  
melted - Solution treated and precipitation hardened -  
Sheet and strip -  $a \leq 6$  mm -  $1\ 240$  MPa  $\leq$  Rm  $\leq$   $1\ 450$  MPa**

Série aérospatiale - Acier X7CrNiAl17-7 (1.4568) -  
Élaboré à l'air - Mis en solution et durci par  
précipitation - Tôles et bande -  $a \leq 6$  mm -  $1\ 240$  MPa  $\leq$   
Rm  $\leq$   $1\ 450$  MPa

Luft- und Raumfahrt - Stahl X7CrNiAl17-7 (1.4568) -  
Lufterschmolzen - Lösungsgeglüht und ausgelagert -  
Bleche und Bänder -  $a \leq 6$  mm -  $1\ 240$  MPa  $\leq$  Rm  $\leq$   $1\ 450$  MPa

This European Standard was approved by CEN on 13 May 2018.

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 CEN-CENELEC Management Centre 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 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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

[SIST EN 2540:2018](https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018)

<https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018>

## European foreword

This document (EN 2540:2018) 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 Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, 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 February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

[SIST EN 2540:2018](https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018)

<https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018>

**EN 2540:2018 (E)**

## **Introduction**

This European 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 European Standard has been prepared in accordance with EN 4500-005.

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

[SIST EN 2540:2018](https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018)

<https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018>

## 1 Scope

This European Standard specifies the requirements relating to:

Steel X7CrNiAl17-7 (1.4568)  
Air melted  
Solution treated and precipitation hardened  
Sheet and strip  
 $a \leq 6$  mm  
 $1\ 240\ \text{MPa} \leq R_m \leq 1\ 450\ \text{MPa}$

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 2043, *Aerospace series — Metallic materials — General requirements for semi-finished product qualification (excluding forgings and castings)*

EN 4258, *Aerospace series — Metallic materials — General organization of standardization — Links between types of EN standards and their use*

EN 4500-005, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 005: Specific rules for steels*

EN 4700-001, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 001: Plate, sheet and strip*

## 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:

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

## 4 Requirements

See Table 1.

## EN 2540:2018 (E)

Table 1 — Requirements for steel X7CrNiAl17-7 (1.4568)

1	Material designation		Steel X7CrNiAl17-7 (1.4568)									
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Cu	Ni	Al	Fe
		min.	–	–	–	–	–	16,0	–	6,50	0,75	Base
		max.	0,09	1,00	1,00	0,040	0,030	18,0	0,50	7,75	1,50	
3	Method of melting		Air melted									
4.1	Form		Sheet and strip									
4.2	Method of production		Cold rolled									
4.3	Limit dimension(s)	mm	$a \leq 6$									
5	Technical specification		EN 4700-001									

6.1	Delivery condition		Solution treated									
	Heat treatment		$1\ 025\ ^\circ\text{C} \leq \theta \leq 1\ 055\ ^\circ\text{C} / t \geq 30\ \text{min} / \text{AC or OQ}$									
6.2	Delivery condition code		W									
7	Use condition		Solution treated and precipitation hardened									
	Heat treatment		Delivery condition $740\ ^\circ\text{C} \leq \theta \leq 780\ ^\circ\text{C} / t \geq 90\ \text{min}$ + cool to $\theta \leq 20\ ^\circ\text{C} / \text{within } 1\ \text{h} / \text{hold for } 30\ \text{min}$ + $550\ ^\circ\text{C} \leq \theta \leq 580\ ^\circ\text{C} / t \geq 90\ \text{min} / \text{AC}$									

## iTeh STANDARD PREVIEW

Characteristics

(standards.iteh.ai)

8.1	Test sample(s)		See EN 4700-001.									
8.2	Test piece(s)		See EN 4700-001.									
8.3	Heat treatment		Delivery condition				Use condition					
9	Dimensions concerned	mm	$a \leq 5$		$5 < a \leq 6$		$a \leq 6$					
10	Thickness of cladding on each face	%	–		–		–					
11	Direction of test piece		–		–		See EN 4700-001.					
12	Temperature	$\theta$	$^\circ\text{C}$		–		Ambient					
13	Proof stress	$R_{p0,2}$	MPa		–		$\geq 1\ 035$					
14	T Strength	$R_m$	MPa		–		$1\ 240 \leq R_m \leq 1\ 450$					
15	Elongation	A	%		–		$\geq 5$					
16	Reduction of area	Z	%		–		–					
17	Hardness		$\leq 229\ \text{HV}$		$\leq 229\ \text{HV}$		$\geq 38\ \text{HRC}$					
18	Shear strength	$R_c$	MPa		–		–					
19	Bending	k	–		$0,5\ \alpha = 180^\circ$		$1,5\ \alpha = 180^\circ$		–			
20	Impact strength		–									
21	Temperature	$\theta$	$^\circ\text{C}$		–							
22	Time		h		–							
23	Stress	$\sigma_a$	MPa		–							
24	C Elongation	a	%		–							
25	Rupture stress	$\sigma_R$	MPa		–							
26	Elongation at rupture	A	%		–							
27	Notes (see line 98)		–									



44	External defects	-	See EN 4700-001.
<p><b>iTeh STANDARD PREVIEW</b>  <b>(standards.iteh.ai)</b></p> <p><u>SIST EN 2540:2018</u>  <a href="https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018">https://standards.iteh.ai/catalog/standards/sist/e4be1382-d81f-4afc-b657-3c3519959f49/sist-en-2540-2018</a></p>			
95	Marking inspection	-	See EN 4700-001.
96	Dimensional inspection	-	See EN 4700-001.
98	Notes	-	-
99	Typical use	-	-