SLOVENSKI STANDARD
oSIST prEN 3525:2021

01-maj-2021

Aeronavtika - Jeklo 15CrMoV6 (1.7334) - Taljeno - Utrjeno in mehko žarjeno - Plošče - 6 mm ≤ a ≤ 20 mm - 1080 MPa ≤ Rm ≤ 1280 MPa

Aerospace series - Steel 15CrMoV6 (1.7334) - Air melted - Hardened and tempered - Plates - 6 mm ≤ a ≤ 20 mm - 1 080 MPa ≤ Rm ≤ 1 280 MPa

Luft- und Raumfahrt - Stahl 15CrMoV6 (1.7334) - Lufterschmolzen - Gehärtet und angelassen - Platten - 6 mm ≤ a ≤ 20 mm - 1 080 MPa ≤ Rm ≤ 1 280 MPa

Série aérospatiale - Acier 15CrMoV6 (1.7334) - Élaboré à l'air - Trempé et revenu - Plaques - 6 mm ≤ a ≤ 20 mm - 1 080 MPa ≤ Rm ≤ 1 280 MPa

Ta slovenski standard je istoveten z: **prEN 3525**

ICS:

49.025.10	Jekla	Steels

oSIST prEN 3525:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 3525

March 2021

ICS 49.025.10

Will supersede EN 3525:2007

English Version

Aerospace series - Steel 15CrMoV6 (1.7334) - Air melted - Hardened and tempered - Plates - 6 mm ≤ a ≤ 20 mm - 1 080 MPa ≤ Rm ≤ 1 280 MPa

Série aérospatiale - Acier 15CrMoV6 (1.7334) - Élaboré à l'air - Trempé et revenu - Plaques - 6 mm ≤ a ≤ 20 mm - 1 080 MPa ≤ Rm ≤ 1 280 MPa

Luft- und Raumfahrt - Stahl 15CrMoV6 (1.7334) - Lufterschmolzen - Gehärtet und angelassen - Platten - 6 mm ≤ a ≤ 20 mm - 1 080 MPa ≤ Rm ≤ 1 280 MPa

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.

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

Ref. No. prEN 3525:2021 E

Contents

Page

European foreword

This document (prEN 3525:2021) 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 3525:2007.

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 4500-005.

1 Scope

This document specifies the requirements relating to:

Steel 15CrMoV6 (1.7334)
Air melted
Hardened and tempered
Plates
6 mm ≤ a ≤ 20 mm
1 080 MPa ≤ R_m ≤ 1 280 MPa

for aerospace applications.

W.nr: 1.7334.

ASD-STAN designation: FE-PL1505.

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 2951, *Aerospace series — Metallic materials — Micrographic determination of content of non-metallic inclusions*

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:

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

4 Requirements

See Table 1.

Table 1 — Requirements for steel 15CrMoV6 (1.7334)

1	Material designation		Steel 15CrMoV6 (1.7334)								
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Mo	Ni	Fe
		min.	0,12	—	0,80	—	—	1,25	0,80	0,20	Base
		max.	0,18	0,20	1,10	0,020	0,015	1,50	1,00	0,30	
3	Method of melting		Air melted								
4.1	Form		Plates								
4.2	Method of production		Rolled								
4.3	Limit dimension(s)	mm	$6 \leq a \leq 20$								
5	Technical specification		EN 4700-001								

6.1	Delivery condition	Softened	Hardened and tempered
	Heat treatment	—	955 °C ≤ θ ≤ 995 °C/OQ or AC + 595 °C ≤ θ ≤ 645 °C/AC
6.2	Delivery condition code	A	U
7	Use condition	Hardened and tempered	Delivery condition
	Heat treatment	Delivery condition 955 °C ≤ θ ≤ 995 °C/OQ or AC + 595 °C ≤ θ ≤ 645 °C/AC	—

Characteristics

8.1	Test sample(s)		See EN 4700-001		
8.2	Test piece(s)		See EN 4700-001		
8.3	Heat treatment		Softened		Use condition
9	Dimensions concerned	mm	$6 \leq a \leq 20$		$6 \leq a \leq 20$
10	Thickness of cladding on each face	%	—	—	—
11	Direction of test piece		—	—	LT

12	T	Temperature	θ	°C	—	—	Ambient
13		Proof stress	$R_{p0,2}$	MPa	—	—	≥ 930
14		Strength	R_m	MPa	—	—	1 080 ≤ R_m ≤ 1 280
15		Elongation	A	%	—	—	≥ 10
16		Reduction of area	Z	%	—	—	—
17	Hardness				≤ 197 HB or ≤ 197 HV	≤ 197 HB or ≤ 197 HV	335 ≤ HV ≤ 382 or 321 ≤ HB ≤ 380
18	Shear strength		R_c	MPa	—	—	—
19	Bending		k	—	0,5; α = 90°	—	—
20	Impact strength				—		
21	C	Temperature	θ	°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)				—		

44	External defects	—	See EN 4700-001.
		1	Visual
50	Cleanliness/inclusion content	—	See EN 4700-001.
		1	EN 2951
		7	Category 1
59	Decarburization	—	See EN 4700-001.
61	Internal imperfections (visual testing – VT)	—	See EN 4700-001.
		7	Class 2

95	Marking inspection		—	See EN 4700-001.
96	Dimensional inspection		—	See EN 4700-001.
98	Notes		—	—
99	Typical use		—	—
100	—	Product qualification	—	See EN 2043. Qualification programme to be agreed between manufacturer and purchaser.