



SLOVENSKI STANDARD
SIST EN 3931:2001
01-januar-2001

Aerospace series - Nickel base alloy NI-B31001 (NiCr19Si10) - Filler metal for brazing - Tape

Aerospace series - Nickel base alloy NI-B31001 (NiCr19Si10) - Filler metal for brazing - Tape

Luft- und Raumfahrt - Nickelbasislegierung NI-B31001 (NiCr19Si10) - Hartlot in Form von Band

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Série aérospatiale - Alliage base nickel NI-B31001 (NiCr19Si10) - Métal d'apport de brasage - Feuillard de poudre agglomérée

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Ta slovenski standard je istoveten z: EN 3931:1998

ICS:

49.025.99 Drugi materiali Other materials

SIST EN 3931:2001 **en**

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EUROPEAN STANDARD

EN 3931

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1998

ICS 49.025.99

Descriptors: aircraft industry, filler metals, brazing, nickel alloys, powdery materials, strips, designation, chemical composition, delivery condition, characteristics, specifications

English version

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This European Standard was approved by CEN on 17 December 1997.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively 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 October 1998, and conflicting national standards shall be withdrawn at the latest by October 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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0 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 4500-6.

1 Scope

This standard specifies the requirements relating to:

Nickel base alloy NI-B31001 (NiCr19Si10)
Filler metal for brazing
Tape

for aerospace applications.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- | | |
|-----------|--|
| EN 2043 | Aerospace series - Metallic materials - General requirements for semi-finished product qualification (excluding forgings and castings) ¹⁾ |
| EN 3875 | Aerospace series - Metallic materials - Filler metal for brazing - Technical specification ¹⁾ |
| EN 3930 | Aerospace series - Nickel base alloy NI-B31001 (NiCr19Si10) - Filler metal for brazing - Powder or paste ¹⁾ |
| EN 4258 | Aerospace series - Metallic materials - General organization of standardization - Links between types of EN standards and their use ¹⁾ |
| EN 4500-6 | Aerospace series - Metallic materials - Rules for drafting and presentation of material standards - Part 6: Specific rules for filler metals for brazing ¹⁾ |

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

1	Material designation		Nickel base braze alloy NI-B31001 (NiCr19Si10)														
2	Chemical composition 1) %	Element	C	Si	P	S	Cr	Al	B	Co	Fe	Se	Ti	Zr	Others Total	Ni Base	
		min.	-	9,75	-	-	18,5	-	-	-	-	-	-	-	-		-
		max.	0,10	10,5	0,02	0,02	19,5	0,05	0,03	0,10	0,5	50*	0,05	0,05	0,05		
3	Method of melting		Air or inert gas or vacuum melted														
4.1	Form		Tape														
4.2	Method of production		Produced from powder EN 3930														
4.3	Limit dimension(s)	mm	-														
5	Technical specification		EN 3875														

6.1	Delivery condition	As manufactured
	Heat treatment	-
6.2	Delivery condition code	U
7	Use condition	Delivery condition
	Heat treatment	-

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Characteristics

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8.1	Test sample(s)			-
8.2	Test piece(s)			-
8.3	Heat treatment			-
9	Dimensions concerned	mm	-	
10	Thickness of cladding on each face	%	-	
11	Direction of test piece			-
12	Temperature	θ	°C	-
13	Proof stress	$R_{p0,2}$	MPa	-
14	Strength	R_m	MPa	-
15	Elongation	A	%	-
16	Reduction of area	Z	%	-
17	Hardness			-
18	Shear strength	R_c	MPa	-
19	Bending	k	-	-
20	Impact strength			-
21	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)			*) 1)

44	External defects	-	See EN 3875
53	Thermal analysis (Differential thermal analysis)	-	See EN 3875
		7	Liquidus : 1 135 °C Solidus : 1 080 °C
76	Wettability (Fusion test)	-	See EN 3875
77	Mass per unit area	-	See EN 3875
78	Metallic alloy content	-	See EN 3875
		7	≥ 91 %
82	Batch uniformity (Material verification)	-	See EN 3875
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95	Marking inspection	-	See EN 3875
96	Dimensional inspection	-	See EN 3875
98	Notes	-	*) p.p.m. 1) The chemical composition refers to the metallic alloy content.
99	Typical use	-	Joining nickel and cobalt base heat resisting alloys.

100	-	Product qualification	-	See EN 2043
Qualification programme to be agreed between manufacturer and purchaser.				
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