



SWEDISH
STANDARDS
INSTITUTE

**SVENSK STANDARD
SS-EN 4383:2007**

Fastställd 2007-01-08

Utgåva 1

**Aerospace series – Heat resisting alloy
NI-CH2601 (NiCr19Fe19Nb5Mo3) – Non heat
treated – Remelting stock**

ICS 49.025.99

Språk: engelska

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EUROPEAN STANDARD

EN 4383

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

**Aerospace series - Heat resisting alloy NI-CH2601
(NiCr19Fe19Nb5Mo3) - Non heat treated - Remelting stock**

Série aérospatiale - Alliage résistant à chaud NI-CH2601
(NiCr19Fe19Nb5Mo3) - Non traité - Produit pour refusion

Luft- und Raumfahrt - Hochwarmfeste Legierung NI-
CH2601 (NiCr19Fe19Nb5Mo3) - Nicht wärmebehandelt -
Gußvormaterial

This European Standard was approved by CEN on 18 October 2006.

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

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EN 4383:2006 (E)

Foreword

This document (EN 4383:2006) 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of an identical text or by endorsement, at the latest by June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

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.

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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 4500-3.

1 Scope

This standard specifies the requirements relating to:

Heat resisting alloy NI-CH2601 (NiCr19Fe19Nb5Mo3)
Non heat treated
Remelting stock

for aerospace applications.

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 2043, *Aerospace series — Metallic materials — General requirements for semi-finished product qualification (excluding forgings and castings)*. ¹⁾

EN 2103-2, *Aerospace series — Steel, nickel base and cobalt base alloy remelting stock and castings — Technical specification — Part 2: Remelting stock*.

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

EN 4500-3, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 3: Specific rules for heat resisting alloys*. ¹⁾

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

EN 4383:2006 (E)

1	Material designation		Heat resisting alloy NI-CH2601 (NiCr19Fe19Nb5Mo3)									
2	Chemical composition %	Element	C	Si	Mn	P	S	Al	B	Co	Cr	
		min.	0,02	–	–	–	–	0,40	20 ^a	–	17,0	
		max.	0,08	0,35	0,35	0,015	0,015	0,80	60 ^a	1,00	21,0	
		Element	Cu	Fe	Mo	Nb	N2	Ti	Ag	Bi	Pb	Ni
		min.	–	16,5	2,80	4,80	–	0,70	–	–	–	Base
max.	0,20	20,5	3,30	5,50	100 ^a	1,15	5 ^a	1 ^a	5 ^a			
3	Method of melting		Vacuum melted									
4.1	Form		Remelting stock									
4.2	Method of production		–									
4.3	Limit dimension(s)	mm	–									
5	Technical specification		EN 2103-2									

6.1	Delivery condition		Non heat treated								
	Heat treatment		–								
6.2	Delivery condition code		U								
7	Use condition		Delivery condition								
	Heat treatment		–								

8.1	Test sample(s)		See EN 2103-2.								
8.2	Test piece(s)		See EN 2103-2.								
8.3	Heat treatment		See line 29.								
9	Dimensions concerned	mm	–								
10	Thickness of cladding on each face	%	–								
11	Direction of test piece		–								
12	Temperature	θ	°C	Ambient ^b							
13	Proof stress	R _{p0,2}	MPa	≥ 755							
14	T Strength	R _m	MPa	≥ 860							
15	Elongation	A	%	≥ 5							
16	Reduction of area	Z	%	≥ 8							
17	Hardness		323 ≤ HB ≤ 409								
18	Shear strength	R _c	MPa	–							
19	Bending	k	–	–							
20	Impact strength		–								
21	Temperature	θ	°C	650 ^{b, c}							
22	Time		h	t _R ≥ 23							
23	Stress	σ_a	MPa	–							
24	Elongation	a	%	–							
25	Rupture stress	σ_R	MPa	620							
26	Elongation at rupture	A	%	–							
27	Notes (see line 98)		a, b, c								