

STN	Letectvo a kozmonautika Prídavné kovy na zváranie Časť 002: Povolené prídavné kovy	STN EN 4877-002 31 2016
------------	---	---

Aerospace series - Filler metals for welding - Part 002: Authorized filler metals

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/23

Obsahuje: EN 4877-002:2023

136957

EUROPEAN STANDARD

EN 4877-002

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2023

ICS 25.160.20

English Version

**Aerospace series - Filler metals for welding - Part 002:
Authorized filler metals**Série aérospatiale - Métaux d'apport de soudage -
Partie 002 : Métaux d'apport autorisésLuft- und Raumfahrt - Schweißzusätze - Teil 002:
Zugelassene Schweißzusätze

This European Standard was approved by CEN on 18 December 2022.

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, 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, Türkiye 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**

EN 4877-002:2023 (E)

Contents	Page
European foreword	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	8
4 List of filler metals	8
Annex A (normative) Product procurement specifications	12
A.1 15CrMoV6 (15CDV6)	12
A.2 NiCr15Fe (Inconel 600, NC15Fe)	13
A.3 NiCr19CoNb (René 220, NC19KNb)	14
A.4 X12CrNiMoV12 (Jethete M152, Z12CNDV12)	15
A.5 Ti15Mo3Al3Nb0.2Si (β21S)	16
A.6 X6CrNiNb20 10 (Z6CNNb20 10)	17
A.7 CoCr28WNi (Coast Metal 64, KC28WN)	18
A.8 CoMo28CrSi (T800, KD28CS)	19
A.9 NiCr14CoTiWMo (René 80, NC14KTWD)	20
A.10 NiCo12CrTaAlW (René 142, NK12CTaAW)	21
A.11 MgRE3Zn2 (ZRE1, GTr3Z2)	22
A.12 TiCu2 (TU2)	23
A.13 X2CrNi18 10 (AISI 304L/Z2CN18-10)	24
A.14 AlSi7Cu1Mg	25
A.15 AlSi7Cu1.5Mg	26
A.16 AlCu5NiCoZr (AU5NKZr)	27
A.17 X2CrNi20-10 (AISI 308L/Z2CN20 10)	28
A.18 X6CrNiTi18 (AISI 321/Z6CNT18 or Z10CNT18)	29
A.19 AlCu5NiTi (AU5NT)	30
A.20 X15CrNiWSi22-13 (Z15CNWS22-13)	31
A.21 CoCr30W12Fe (KC30W12Fe)	32
A.22 MgZn4RE (GZ4TR – RZ5)	33
A.23 MgAg2,5RE (GAg2.5TR — Elektron MSR)	34
A.24 NiCr16CoAlTi (NC16KAT — Inconel 738)	35
A.25 8Mn5Si3 (8M5S3)	36
A.26 12Mn4Si (12M4S)	37
A.27 E-35CrMoV20 (E 35CDV20)	38

A.28	GTh3Z2 (ZT1)	39
A.29	AlCu5MgTi (AU5GT)	40
A.30	AlSi7Mg0.3 (AS7G03)	41
A.31	AlSi2CuNi (AS2UN)	42
A.32	5083 (AG4,5MC)	43
A.33	5086 (AG4MC)	44

EN 4877-002:2023 (E)**European foreword**

This document (EN 4877-002:2023) 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, prior to its presentation to CEN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2023, and conflicting national standards shall be withdrawn at the latest by September 2023.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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, Türkiye and the United Kingdom.

1 Scope

This document specifies a list of procurement specifications and standards for welding products authorized for the welding of parts.

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 3883, *Aerospace series — Heat resisting alloy NI-WH2301 (NiCr22Fe19Mo9Co2) — Filler metal for welding*

EN 3884, *Aerospace series — Heat resisting alloy NI-WH2601 (NiCr19Nb5Mo3Ti) — Filler metal for welding*

EN 3885, *Aerospace series — Heat resisting alloy NI-WH3601 (NiCr22Mo9Nb4) — Filler metal for welding*

EN 3887, *Aerospace series — Heat resisting alloy CO-WH4101 (CoCr20W15Ni) — Filler metal for welding*

EN 3888, *Aerospace series — Heat resisting alloy CO-WH1402 (CoCr22Ni22W15) — Filler metal for welding*

EN 3889, *Aerospace series — Steel FE-WM3801 (X5CrNiCu17-4) — Filler metal for welding*

EN 3892, *Aerospace series — Titanium alloy TI-W64001 — Filler metal for welding*

EN 3894, *Aerospace series — Heat resisting alloy NI-WD3201 (NiMo25Fe6Cr5) — Filler metal for welding*

EN 4329, *Aerospace series — Heat resisting alloy NI-WH0001 (NiCr20) — Filler metal for welding — Wire and rod*

EN 4331, *Aerospace series — Steel FE-WL1804 (25CrMnMo4-2-2) — Filler metal for welding — Wire and rod*

EN 4332, *Aerospace series — Steel FE-WL1805 (8CrMnMo12-4-9) — Filler metal for welding — Wire and rod*

EN 4340, *Aerospace series — Magnesium alloy MG-W68001 — Filler metal for welding — Wire and rod*

EN 4683, *Aerospace series — Steel FE-WM 3504 (X4CrNiMo16-5-1) — Air melted — Filler metal for welding — Wire and rod*

EN 4877-001, *Aerospace series — Filler metals for welding — Part 001: Technical specification* ¹⁾

ISO 14343, *Welding consumables — Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels — Classification* ²⁾

ISO 18273, *Welding consumables — Wire electrodes, wires and rods for welding of aluminium and aluminium alloys — Classification* ²⁾

¹⁾ In preparation at the date of publication of this document.

²⁾ Published by: ISO International Organization for Standardization <http://www.iso.ch/>.

EN 4877-002:2023 (E)

ISO 18274, *Welding consumables — Solid wire electrodes, solid strip electrodes, solid wires and solid rods for fusion welding of nickel and nickel alloys — Classification* ²⁾

ISO 21952, *Welding consumables — Wire electrodes, wires, rods and deposits for gas-shielded arc welding of creep-resisting steels — Classification* ²⁾

SAE AMS 4189, *Aluminium Alloy Welding Wire 4.1 Si — 0.20 Mg (4643)* ³⁾

SAE AMS 4190, *Aluminium Alloy, Welding Wire 5.2Si (4043)* ³⁾

SAE AMS 4222, *Aluminium Alloy Castings, Sand, Moderate Heat Resistance, 4.0Cu — 2.0Ni — 1.5Mg — 0.12Ti (242.0P), Solution Heat Treated and Stabilized* ³⁾

SAE AMS 4245, *Aluminium Alloy, Welding Wire, 5.0Si — 1.2Cu — 0.50Mg (C355.0)* ³⁾

SAE AMS 4246, *Aluminium Alloy, Welding Wire, 7.0Si — 0.52Mg (357)* ³⁾

SAE AMS 4391, *Magnesium Alloy Welding Wire 2.8Nd — 1.4Gd — 0.4Zn — 0.6Zr (EV31A)* ³⁾

SAE AMS 4393, *Magnesium Alloy Welding Wire 4.0Y — 2.3Nd — 0.7Zr (WE43B)* ³⁾

SAE AMS 4398, *Magnesium Alloy Welding Wire 8.7Al — 0.70Zn — 0.26Mn (AZ91E)* ³⁾

SAE AMS 4439, *Magnesium Alloy Castings, 4.2Zn — 1.2 Rare Earths — 0.7Zr (ZE41A-T5), Precipitation Heat Treated* ³⁾

SAE AMS 4951, *Titanium Welding Wire Commercially Pure Environment Controlled Packaging* ³⁾

SAE AMS 5675, *Nickel Alloy, Corrosion and Heat Resistant, Welding Wire 70Ni — 2.5Mn — 15.5Cr — 3.0Ti — 7.0Fe* ³⁾

SAE AMS 5676, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 80Ni — 20Cr* ³⁾

SAE AMS 5680, *Steel, Corrosion and Heat-Resistant, Welding Wire 18.5Cr — 11Ni — 0.40Cb (Nb) (SAE 30347)* ³⁾

SAE AMS 5692, *Steel, Corrosion and Heat-Resistant, Welding Wire 19Cr — 12.5Ni — 2.5Mo* ³⁾

SAE AMS 5694, *Steel, Corrosion and Heat-Resistant, Welding Wire, 27Cr — 21.5Ni* ³⁾

SAE AMS 5776, *Steel, Corrosion and Heat-Resistant, Welding Wire 12.5Cr (SAE 51410)* ³⁾

SAE AMS 5784, *Steel, Corrosion and Heat-Resistant, Welding Wire 29Cr — 9.5Ni* ³⁾

SAE AMS 5786, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 62.5Ni — 5.0Cr — 24.5Mo — 5.5Fe* ³⁾

SAE AMS 5789, *Cobalt Alloy, Corrosion and Heat-Resistant, Welding Wire 54Co — 25.5Cr — 10.5Ni — 7.5W* ³⁾

SAE AMS 5794, *Iron Alloy, Corrosion and Heat-Resistant, Welding Wire, 31Fe — 21Cr — 20Ni — 20Co — 3.0Mo — 2.5W — 1.0Cb — 0.15N, Annealed* ³⁾

³⁾ Published by: Society of Automotive Engineers (SAE), available at: <https://www.sae.org/>.

SAE AMS 5796, *Cobalt Alloy, Corrosion and Heat-Resistant, Welding Wire 52Co — 20Cr — 10Ni — 15W*³⁾

SAE AMS 5798, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 47.5Ni — 22Cr — 1.5Co — 9.0Mo — 0.60W — 18Fe*³⁾

SAE AMS 5800, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 54Ni — 19Cr — 11Co — 10Mo — 3.2Ti — 1.5Al — 0.006B, Vacuum Induction Melted*³⁾

SAE AMS 5801, *Cobalt Alloy, Corrosion and Heat-Resistant, Welding Wire 39Co — 22Cr — 22Ni — 14.5W — 0.07La*³⁾

SAE AMS 5802, *Iron-Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 41Fe — 37.5Ni — 14Co — 4.8Cb (Nb) — 1.5Ti Vacuum Melted, Low Expansion*³⁾

SAE AMS 5805, *Steel, Corrosion and Heat Resistant, Welding Wire 15Cr — 25.5Ni — 1.2Mo — 2.1Ti — 0.004B — 0.30V Vacuum Induction Melted, Environment Controlled Packaging*³⁾

SAE AMS 5812, *Steel, Corrosion and Heat Resistant, Welding Wire 15Cr — 7.1Ni — 2.4Mo — 1.0Al Vacuum Induction Melted*³⁾

SAE AMS 5821, *Steel, Corrosion-Resistant, Welding Wire 12Cr (SAE 51410 Modified) Ferrite Control Grade*³⁾

SAE AMS 5825, *Steel, Corrosion-Resistant, Welding Wire 16.4Cr — 4.8Ni — 0.22Cb(Nb) — 3.6Cu*³⁾

SAE AMS 5828, *Nickel Alloy, Corrosion and Heat Resistant, Welding Wire 57Ni — 19.5Cr — 13.5Co — 4.2Mo — 3.1Ti — 1.4Al — 0.006B Vacuum Induction Melted, Solution Heat Treated*³⁾

SAE AMS 5829, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 56Ni — 19.5Cr — 16.5Co — 2.5Ti — 1.5Al Vacuum Induction Melted*³⁾

SAE AMS 5832, *Nickel Alloy, Corrosion and Heat Resistant, Welding Wire 52.5Ni — 19Cr — 3.0Mo — 5.1Cb(Nb) — 0.90Ti — 0.50Al — 18Fe Consumable Electrode or Vacuum Induction Melted*³⁾

SAE AMS 5836, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 72Ni — 3.0Mn — 20Cr — 2.5Cb(Nb)*³⁾

SAE AMS 5837, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire 62Ni — 21.5Cr — 9.0Mo — 3.7Cb(Nb)*³⁾

SAE AMS 5838, *Nickel Alloy, Corrosion and Heat-Resistant, Welding Wire, 65Ni — 16Cr — 15Mo — 0.30Al — 0.06La*³⁾

SAE AMS 5966, *Nickel Alloy, Corrosion and Heat Resistant, Welding Wire, 50Ni — 20Cr — 20Co — 5.9Mo — 2.2Ti — 0.45Al, Consumable Electrode or Vacuum Induction Melted*³⁾

SAE AMS 6458, *Steel, Welding Wire 0.65Si — 1.25Cr — 0.50Mo — 0.30V (0.28 - 0.33C) Vacuum Melted, Environment Controlled Packaging*³⁾

koniec náhľadu – text ďalej pokračuje v platenej verzii STN