

<b>STN</b>	<b>Zváracie materiály</b> <b>Plnené drôtové elektródy na oblúkové zváranie</b> <b>niklu a niklových zliatin v ochrannom plyne alebo</b> <b>bez ochranného plynu</b> <b>Klasifikácia (ISO 12153: 2022)</b>	<b>STN</b> <b>EN ISO 12153</b>  05 5506
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Welding consumables - Tubular-cored electrodes for gas-shielded and non-gas-shielded metal arc welding of nickel and nickel alloys - Classification (ISO 12153:2022)

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. 01/23

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EUROPEAN STANDARD

EN ISO 12153

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EUROPÄISCHE NORM

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Supersedes EN ISO 12153:2012

English Version

## Welding consumables - Tubular-cored electrodes for gas-shielded and non-gas-shielded metal arc welding of nickel and nickel alloys - Classification (ISO 12153:2022)

Produits consommables pour le soudage - Fils-électrodes fourrés pour soudage à l'arc avec ou sans gaz de protection du nickel et des alliages de nickel - Classification (ISO 12153:2022)

Schweißzusätze - Fülldrahtelektroden zum Metall-Lichtbogenschweißen mit und ohne Gasschutz von Nickel und Nickellegierungen - Einteilung (ISO 12153:2022)

This European Standard was approved by CEN on 22 September 2022.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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**EN ISO 12153:2022 (E)**

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## **European foreword**

This document (EN ISO 12153:2022) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding and allied processes" the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by May 2023.

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.

This document supersedes EN ISO 12153:2012.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

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, 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.

## **Endorsement notice**

The text of ISO 12153:2022 has been approved by CEN as EN ISO 12153:2022 without any modification.



# INTERNATIONAL STANDARD

# ISO 12153

Second edition  
2022-10

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## **Welding consumables — Tubular-cored electrodes for gas-shielded and non-gas-shielded metal arc welding of nickel and nickel alloys — Classification**

*Produits consommables pour le soudage — Fils-électrodes fourrés pour soudage à l'arc avec ou sans gaz de protection du nickel et des alliages de nickel — Classification*



Reference number  
ISO 12153:2022(E)

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# ISO 12153:2022(E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 12153:2011), which has been technically revised.

The main changes are as follows:

- dated references updated to the latest editions;
- the chemistries of a number of classifications revised in [Table 1](#);
- a new alloy symbol, Ni 6023 (numerical), NiCr13Mo13W3 (chemical) added in [Table 1](#), [Table 2](#) and [Table A.1](#);
- a restricted numerical alloy symbol Ni 6117R and chemistry added to [Table 1](#);
- the minimum elongation for Ni 1013 revised in [Table 2](#);
- [Table A.1](#) updated to reflect the above changes and provide missing data.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html). Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: <https://committee.iso.org/sites/tc44/home/interpretation.html>.

# Welding consumables — Tubular-cored electrodes for gas-shielded and non-gas-shielded metal arc welding of nickel and nickel alloys — Classification

## 1 Scope

This document specifies requirements for the classification of tubular-cored electrodes for metal arc welding with or without a gas shield of nickel and nickel alloys. It includes those compositions in which the nickel content exceeds that of any other element.

## 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.

ISO 544, *Welding consumables — Technical delivery conditions for filler materials and fluxes — Type of product, dimensions, tolerances and markings*

ISO 6847, *Welding consumables — Deposition of a weld metal pad for chemical analysis*

ISO 6947, *Welding and allied processes — Welding positions*

ISO 14175, *Welding consumables — Gases and gas mixtures for fusion welding and allied processes*

ISO 14344, *Welding consumables — Procurement of filler materials and fluxes*

ISO 15792-1:2020, *Welding consumables — Test methods — Part 1: Preparation of all-weld metal test pieces and specimens in steel, nickel and nickel alloys*

ISO 80000-1:2009, *Quantities and units — Part 1: General*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**