



SLOVENSKI STANDARD
SIST EN ISO 6848:2005

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Arc welding and cutting - Nonconsumable tungsten electrodes - Classification (ISO 6848:2004)

Lichtbogenschweißen und -schneiden - Wolframelektrode - Einteilung (ISO 6848:2004)

(standards.iteh.ai)

Sondage et coupage a l'arc - Electrodes non consommables et tungstene - Classification (ISO 6848:2004)

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Ta slovenski standard je istoveten z: EN ISO 6848:2004

ICS:

25.160.20 Potrošni material pri varjenju Welding consumables

SIST EN ISO 6848:2005

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 6848

December 2004

ICS 25.160.20

Supersedes EN 26848:1991

English version

Arc welding and cutting - Nonconsumable tungsten electrodes - Classification (ISO 6848:2004)

Sondage et coupage à l'arc - Electrodes non
consommables et tungstène - Classification (ISO
6848:2004)

This European Standard was approved by CEN on 8 November 2004.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN ISO 6848:2004 (E)**Foreword**

This document (EN ISO 6848:2004) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding", 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 June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

This document supersedes EN 26848:1991.

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

Endorsement notice

The text of ISO 6848:2004 has been approved by CEN as EN ISO 6848:2004 without any modifications.

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INTERNATIONAL STANDARD

**ISO
6848**

Second edition
2004-12-01

Arc welding and cutting — Nonconsumable tungsten electrodes — Classification

*Soudage et coupage à l'arc — Électrodes non consommables en
tungstène — Classification*

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Reference number
ISO 6848:2004(E)

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Published in Switzerland

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6848 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*.

This second edition cancels and replaces the first edition (ISO 6848:1984), which has been technically revised.

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ISO 6848:2004(E)**Introduction**

Tungsten electrodes are used in a variety of welding and allied processes, including tungsten inert gas welding, plasma arc welding and cutting, plasma spraying, and atomic hydrogen welding. In contrast to most other welding electrodes, tungsten electrodes are not intended to become part of the weld deposit. Nevertheless, the chemical composition of a tungsten electrode has an important effect on its range of usage in welding and allied processes. Therefore, tungsten electrodes are classified according to their chemical composition.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 3 via your national standards body. A complete listing of national standards bodies can be found at www.iso.org.

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Arc welding and cutting — Nonconsumable tungsten electrodes — Classification

1 Scope

This International Standard specifies requirements for classification of nonconsumable tungsten electrodes for inert gas shielded arc welding, and for plasma welding, cutting and thermal spraying.

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.

ISO 31-0:1992, *Quantities and units — Part 0: General principles*

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3 Classification [\(standards.iteh.ai\)](https://standards.iteh.ai/catalog/standards/sist/4bf6d914-990a-406b-a3ba-79c31048748b/sist-en-iso-6848-2005)

Classification of a tungsten electrode is based upon its chemical composition.

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4 Symbols and requirements

4.1 Symbol for the product/process

The symbol for gas shielded tungsten arc processes is the letter W.

4.2 Symbol for the chemical composition

The symbol for the chemical composition of the tungsten electrode is the chemical symbol for the principal oxide additive followed by digits indicating the nominal mass percent of the oxide additive multiplied by 10. If there is no additive, the symbol is the letter P. Table 1 lists the composition requirements for the various classifications. Compositions not listed in Table 1 shall be symbolized by the letters WG, followed by the chemical symbol and digits for the major oxide additive, according to the principle used for the other compositions given in Table 1.

5 Chemical analysis

Chemical analysis shall be performed on specimens of the electrode being classified. Any analytical technique may be used but, in cases of dispute, reference shall be made to established published methods.

6 Retests

If any test fails to meet the requirement, that test shall be repeated twice. The results of both retests shall meet the requirements. Specimens for retesting may be taken from the original test assembly or from a new test assembly. For chemical analysis, retests need only be for those specific elements that failed to meet their