



NSAI
Standards

Irish Standard
I.S. EN ISO 14341:2011

Welding consumables - Wire electrodes and weld deposits for gas shielded metal arc welding of non alloy and fine grain steels - Classification (ISO 14341:2010)

I.S. EN ISO 14341:2011

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English Version

**Welding consumables - Wire electrodes and weld deposits for
gas shielded metal arc welding of non alloy and fine grain steels
- Classification (ISO 14341:2010)**

Produits consommables pour le soudage - Fils-électrodes
et métaux d'apport déposés en soudage à l'arc sous
protection gazeuse des aciers non alliés et à grains fins -
Classification (ISO 14341:2010)

Schweißzusätze - Drahtelektroden und Schweißgut zum
Metall-Schutzgasschweißen von unlegierten Stählen und
Feinkornstählen - Einteilung (ISO 14341:2010)

This European Standard was approved by CEN on 25 December 2010.

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Contents

Page

Foreword.....	3
----------------------	----------

Foreword

The text of ISO 14341:2010 has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 14341:2011 by 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of an identical text or by endorsement, at the latest by July 2011, and conflicting national standards shall be withdrawn at the latest by July 2011.

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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Endorsement notice

The text of ISO 14341:2010 has been approved by CEN as a EN ISO 14341:2011 without any modification.

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I.S. EN ISO 14341:2011
**INTERNATIONAL
STANDARD**

**ISO
14341**

Second edition
2010-02-15

**Welding consumables — Wire electrodes
and weld deposits for gas shielded metal
arc welding of non alloy and fine grain
steels — Classification**

*Produits consommables pour le soudage — Fils-électrodes et métaux
d'apport déposés en soudage à l'arc sous protection gazeuse des
aciers non alliés et à grains fins — Classification*



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Contents

Page

Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Classification	2
4 Symbols and requirements	2
4.1 Symbol for product/process	2
4.2 Symbol for strength and elongation of all-weld metal	3
4.3 Symbol for impact properties of all-weld metal	3
4.4 Symbol for shielding gas	4
4.5 Symbol for chemical composition of wire electrodes	4
5 Mechanical tests	8
5.1 Preheating and interpass temperatures	8
5.2 Welding conditions and pass sequence	9
5.3 Post-weld heat-treated (PWHT) condition.....	9
6 Chemical analysis	10
7 Rounding procedure	10
8 Retests	10
9 Technical delivery conditions	10
10 Examples of designation	11

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 14341 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 14341:2002).

Requests for official interpretation 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 these bodies can be found at www.iso.org.

Introduction

This International Standard recognizes that there are two somewhat different approaches in the global market to classifying a given wire electrode, and allows for either or both to be used, to suit a particular market need. Application of either type of classification designation (or both where suitable) identifies a product as classified in accordance with this International Standard.

This International Standard provides a classification in order to designate wire electrodes in terms of their chemical composition and, where required, in terms of the yield strength, tensile strength and elongation of the all-weld metal. The ratio of yield strength to tensile strength of weld metal is generally higher than that of parent metal. Users should note that matching weld metal yield strength to parent metal yield strength does not necessarily ensure that the weld metal tensile strength matches that of the parent material. Therefore, where the application requires matching tensile strength, selection of the consumable should be made by reference to column 3 of Table 1A or 1B.

It should be noted that the mechanical properties of all-weld metal test specimens used to classify the electrodes vary from those obtained in production joints because of differences in welding procedures such as electrode size, width of weave, welding position and material composition.

I.S. EN ISO 14341:2011

Welding consumables — Wire electrodes and weld deposits for gas shielded metal arc welding of non alloy and fine grain steels — Classification

1 Scope

This International Standard specifies requirements for classification of wire electrodes and weld deposits in the as-welded condition and in the post-weld heat-treated condition for gas shielded metal arc welding of non alloy and fine grain steels with a minimum yield strength of up to 500 MPa or a minimum tensile strength of up to 570 MPa. One wire electrode can be tested and classified with different shielding gases.

This International Standard constitutes a combined specification providing classification utilizing a system based upon the yield strength and the average impact energy of 47 J of all-weld metal, or utilizing a system based upon the tensile strength and the average impact energy of 27 J of all-weld metal.

- a) Clauses and tables which carry the suffix letter “A” are applicable only to wire electrodes classified to the system based upon the yield strength and the average impact energy of 47 J of all-weld metal in accordance with this International Standard.
- b) Clauses and tables which carry the suffix letter “B” are applicable only to wire electrodes classified to the system based upon the tensile strength and the average impact energy of 27 J of all-weld metal in accordance with this International Standard.
- c) Clauses and tables which have neither the suffix letter “A” nor the suffix letter “B” are applicable to all wire electrodes classified in accordance with this International Standard.

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

ISO 13916, *Welding — Guidance on the measurement of preheating temperature, interpass temperature and preheat maintenance temperature*

ISO 14175:2008, *Welding consumables — Gases and gas mixtures for fusion welding and allied processes*

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

ISO 15792-1:2000, *Welding consumables — Test methods — Part 1: Test methods for all-weld metal test specimens in steel, nickel and nickel alloys*

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

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