

**Welding consumables - Welding consumables for
hard-facing**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Welding consumables - Welding consumables for hard-facing

Produits consommables de soudage - Produits
consommables pour le rechargement dur

Schweißzusätze - Schweißzusätze zum Hartauftragen

This European Standard was approved by CEN on 8 February 2014.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 14700:2014) has been prepared by 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of an identical text or by endorsement, at the latest by October 2014 and conflicting national standards shall be withdrawn at the latest by October 2014.

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.

This document supersedes EN 14700:2005.

The main following changes have been made:

- a) the classification is now divided in two compulsory parts and 3 optional parts;
- b) 4.3 "Designation of the typical composition" added;
- c) 4.4 "Symbol for the range of hardness" added;
- d) 4.5 "Symbol for the auxiliary material" added;
- e) new alloys added;
- f) in Table A.3 "Form of supply of consumables and applicable processes for hard-facing" the welding processes are updated according to EN ISO 4063:2010;
- g) in Table A.4 "Examples of application";
- h) normative references updated.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard applies to welding consumables for hardfacing. The range of application includes surfaces of new structural components, semi-finished products as well as repair of surfaces of structural components which have to resist to mechanical, chemical, thermal or combined stress.

This European Standard specifies requirements for classification of the consumables based on their chemical composition of the all weld metal of covered electrodes, cored wires, cored rods, cored strips, sintered strips, sintered rods and metal powders and on the chemical composition of solid wires, solid rods, solid strips and cast rods.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 544, *Welding consumables - Technical delivery conditions for filler materials and fluxes - Type of product, dimensions, tolerances and markings* (ISO 544:2011)

EN ISO 6847, *Welding consumables - Deposition of a weld metal pad for chemical analysis* (ISO 6847:2013)

EN ISO 14174:2012, *Welding consumables - Fluxes for submerged arc welding and electroslag welding - Classification* (ISO 14174:2012)

EN ISO 14175:2008, *Welding consumables - Gases and gas mixtures for fusion welding and allied processes* (ISO 14175:2008)

EN ISO 14344, *Welding consumables - Procurement of filler materials and fluxes* (ISO 14344:2010)

EN ISO 80000-1:2013, *Quantities and units - Part 1: General* (ISO 80000-1:2009 + Cor 1:2011)

3 Classification

The classification is divided in two compulsory parts and 3 optional parts:

Compulsory part:

- a) the first part gives a symbol indicating the product form, see 4.1;
- b) the second part gives an alloy symbol indicating the range of composition and the suitability, see Table 2.

Optional part:

- c) the third part indicates the typical composition, see 4.3;
- d) the fourth part indicates the range of hardness of the all weld metal, see 4.4;
- e) the fifth part indicates the welding auxiliary material (shielding gas and fluxes), see 4.5.

The parts c), d) and e) will be hyphenated from the compulsory part.