Welding consumables - General product standard for filler metals and fluxes for fusion welding of metallic materials

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NATIONAL FOREWORD

See Eesti standard EVS-EN 13479:2017 sisaldab Euroopa standardi EN 13479:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 13479:2017 consists of the English text of the European standard EN 13479:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 28.06.2017.	Date of Availability of the European standard is 28.06.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Welding consumables - General product standard for filler metals and fluxes for fusion welding of metallic materials

Produits consommables pour le soudage - Norme produit générale pour les métaux d'apport et les flux pour le soudage par fusion de matériaux métalliques

Schweißzusätze - Allgemeine Produktnorm für Zusätze und Pulver zum Schmelzschweißen von metallischen Werkstoffen

This European Standard was approved by CEN on 11 May 2017.

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

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European foreword

This document (EN 13479:2017) 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of an identical text or by endorsement, at the latest by December 2017 and conflicting national standards shall be withdrawn at the latest by March 2019.

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 13479:2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports basic work requirements of Regulation (EU) 305/2011.

For relationship with EU Regulation 305/2011, see informative Annex ZA, which is an integral part of this document.

In comparison with the previous edition, the following modifications have been made:

— the Introduction has been deleted;

— the normative references have been updated;

— the terms 3.1 (product specification), 3.2 (manufacturer) and 3.3 (deposited metal) have been deleted from Clause 3;

— the entire document, including the Annex ZA, has been editorially revised.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies product characteristics and related test/assessment methods for filler materials (welding consumables as defined in ISO/TR 25901-1) and fluxes to be used for fusion welding of metallic structures or composite metals and concrete structures in construction works.

This European Standard does not cover shielding gases and ceramic backings (as defined in ISO/TR 25901-1).

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 12536:2000, *Welding consumables - Rods for gas welding of non alloy and creep-resisting steels - Classification*

EN ISO 636:2015, *Welding consumables - Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels - Classification (ISO 636:2015)*

EN ISO 1071:2015, *Welding consumables - Covered electrodes, wires, rods and tubular cored electrodes for fusion welding of cast iron - Classification (ISO 1071:2015)*

EN ISO 2560:2009, *Welding consumables - Covered electrodes for manual metal arc welding of non-alloy and fine grain steels - Classification (ISO 2560:2009)*

EN ISO 3580:2011, *Welding consumables - Covered electrodes for manual metal arc welding of creep-resisting steels - Classification (ISO 3580:2010)*

EN ISO 3581:2016, *Welding consumables - Covered electrodes for manual metal arc welding of stainless and heat-resisting steels - Classification (ISO 3581:2016)*

EN ISO 14171:2016, *Welding consumables - Solid wire electrodes, tubular cored electrodes and electrode/flux combinations for submerged arc welding of non alloy and fine grain steels - Classification (ISO 14171:2016)*

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

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)*

EN ISO 14343:2017, *Welding consumables - Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels - Classification (ISO 14343:2017)*

EN ISO 16834:2012, *Welding consumables - Wire electrodes, wires, rods and deposits for gas shielded arc welding of high strength steels - Classification (ISO 16834:2012)*

EN ISO 17632:2015, *Welding consumables - Tubular cored electrodes for gas shielded and non-gas shielded metal arc welding of non-alloy and fine grain steels - Classification (ISO 17632:2015)*

EN ISO 17633:2010, *Welding consumables - Tubular cored electrodes and rods for gas shielded and non-gas shielded metal arc welding of stainless and heat-resisting steels - Classification (ISO 17633:2010)*

EN ISO 17634:2015, *Welding consumables - Tubular cored electrodes for gas shielded metal arc welding of creep-resisting steels - Classification (ISO 17634:2015)*

EN ISO 18273:2015, *Welding consumables - Wire electrodes, wires and rods for welding of aluminium and aluminium alloys - Classification (ISO 18273:2015)*

EN ISO 18275:2012, *Welding consumables - Covered electrodes for manual metal arc welding of high-strength steels - Classification (ISO 18275:2011)*

EN ISO 18276:2017, *Welding consumables - Tubular cored electrodes for gas-shielded and non-gas-shielded metal arc welding of high strength steels - Classification (ISO 18276:2017)*

EN ISO 21952:2012, *Welding consumables - Wire electrodes, wires, rods and deposits for gas shielded arc welding of creep-resisting steels - Classification (ISO 21952:2012)*

EN ISO 24598:2012, *Welding consumables - Solid wire electrodes, tubular cored electrodes and electrode-flux combinations for submerged arc welding of creep-resisting steels - Classification (ISO 24598:2012)*

EN ISO 26304:2011, *Welding consumables - Solid wire electrodes, tubular cored electrodes and electrode-flux combinations for submerged arc welding of high strength steels - Classification (ISO 26304:2011)*

CEN/TR 10261, *Iron and steel - European standards for the determination of chemical composition*

ISO/TR 25901-1:2016, *Welding and allied processes - Vocabulary - Part 1: General terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/TR 25901-1:2016 apply.

4 Product characteristics

Chemical composition in % (m/m) for the following welding consumables shall be in accordance with the requirements for the applicable type of product as listed below:

Covered electrodes for manual metal arc welding:

— *of cast iron:* EN ISO 1071:2015, Table 2 or 3;

— *of non-alloy and fine grain steels:* EN ISO 2560:2009, Table 3A or 3B;

— *of creep-resisting steels:* EN ISO 3580:2011, Table1;

— *of stainless and heat-resisting steels:* EN ISO 3581:2016, Table1;

— *of high-strength steels:* EN ISO 18275:2012, Table 3A or 3B.

Solid wires/rods/strips:

— *for tungsten inert gas welding of non-alloy and fine-grain steels:* EN ISO 636:2015, Table 3A or 3B;

— *for fusion welding of cast iron:* EN ISO 1071:2015, Table 2 or 3;

— *for gas welding of non alloy and creep-resisting steels:* EN 12536:2000, Table1;

— *for submerged arc welding of non alloy and fine grain steels:* EN ISO 14171:2016, Table 4A or, 4B, 5A or 5B;