

**Steel wire and wire products for fencing and netting -  
Part 7: Steel wire welded panels for fencing**

This document is a preview generated by EVS

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 10223-7:2012 sisaldab Euroopa standardi EN 10223-7:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 10223-7:2012 consists of the English text of the European standard EN 10223-7:2012.
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 28.11.2012.	Date of Availability of the European standard is 28.11.2012.
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](mailto:standardiosakond@evs.ee).

ICS 77.140.65

Võtmesõnad: acceptance testing, measurement, quality, specification (approval), specifications, steel products, steel wire cloth, steel wire products, steel wires, zinc, zinc alloys, zinc coatings, testing, tolerances, tolerances (measurement), welded, wire nettings, wires,

### Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:  
Aru 10, 10317 Tallinn, Eesti; [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

### The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:  
Aru 10, 10317 Tallinn, Estonia; [www.evs.ee](http://www.evs.ee); phone 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

English Version

## Steel wire and wire products for fencing and netting - Part 7: Steel wire welded panels for fencing

Fils et produits tréfilés en acier pour clôtures et grillages -  
Partie 7: Panneaux en acier soudés pour clôturage

Stahldraht und Drahterzeugnisse für Zäune und  
Drahtgeflechte - Teil 7: Geschweißte Paneele für Zäune

This European Standard was approved by CEN on 13 October 2012.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

**Contents**

Page

Foreword.....	3
<b>1</b> <b>Scope</b> .....	<b>4</b>
<b>2</b> <b>Normative references</b> .....	<b>4</b>
<b>3</b> <b>Terms and definitions</b> .....	<b>5</b>
<b>4</b> <b>Information to be obtained from the purchaser</b> .....	<b>6</b>
<b>5</b> <b>Designation</b> .....	<b>7</b>
<b>6</b> <b>Manufacture</b> .....	<b>7</b>
6.1 <b>Base metal</b> .....	<b>7</b>
6.2 <b>Fabrication</b> .....	<b>7</b>
<b>7</b> <b>Requirements</b> .....	<b>7</b>
7.1 <b>Tensile strength</b> .....	<b>7</b>
7.2 <b>Size tolerances</b> .....	<b>8</b>
7.2.1 <b>Round wires</b> .....	<b>8</b>
7.2.2 <b>Other shapes</b> .....	<b>8</b>
7.3 <b>Mesh dimensions and tolerance</b> .....	<b>8</b>
7.4 <b>Coatings</b> .....	<b>8</b>
7.4.1 <b>Zinc and zinc alloy coatings</b> .....	<b>8</b>
7.4.2 <b>Organic coating</b> .....	<b>8</b>
7.5 <b>Weld shear strength</b> .....	<b>9</b>
7.6 <b>Stiffness</b> .....	<b>9</b>
<b>8</b> <b>Sampling</b> .....	<b>9</b>
<b>9</b> <b>Tests on panels</b> .....	<b>9</b>
9.1 <b>Tensile test</b> .....	<b>9</b>
9.2 <b>Wire dimension</b> .....	<b>10</b>
9.3 <b>Coating test methods</b> .....	<b>10</b>
9.3.1 <b>Zinc or zinc alloy coating of wire before fabrication</b> .....	<b>10</b>
9.3.2 <b>Hot dip zinc or zinc alloy coating by batch process (panels)</b> .....	<b>10</b>
9.3.3 <b>Organically coated wire after fabrication</b> .....	<b>10</b>
9.4 <b>Weld shear strength</b> .....	<b>10</b>
9.5 <b>Stiffness</b> .....	<b>11</b>
<b>10</b> <b>Inspection</b> .....	<b>11</b>
<b>11</b> <b>Packaging</b> .....	<b>11</b>
<b>Annex A (normative) Weld shear strength test method (welded mesh)</b> .....	<b>12</b>
<b>Bibliography</b> .....	<b>14</b>

## Foreword

This document (EN 10223-7:2012) has been prepared by Technical Committee ECISS/TC 106 "Wire rod and wires", the secretariat of which is held by AFNOR.

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 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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 10223-7:2002.

EN 10223 "Steel wire and wire products for fencing and netting" consists of the following parts:

- *Part 1: Zinc and zinc-alloy coated steel barbed wire*
- *Part 2: Hexagonal steel wire netting for agricultural, insulation and fencing purposes*
- *Part 3: Hexagonal steel wire mesh products for engineering purposes*
- *Part 4: Steel wire welded mesh fencing*
- *Part 5: Steel wire woven hinged joint and knotted mesh fencing*
- *Part 6: Steel wire chain link fencing*
- *Part 7: Steel wire welded panels for fencing*
- *Part 8: Welded mesh gabion products*

The document has been technically updated.

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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 specifies requirements for steel wire welded mesh panels for fencing. The panels are used for fencing parks, schools, sport stadia, public buildings, factories, airports, military sites, etc.

This European Standard specifies the general characteristics of welded mesh supplied as panels and recommended coatings, properties and tolerances. This European Standard is applicable to panels made from round or shaped wires not thicker than 10 mm.

The panels have round, rectangular or triangular vertical wires and single or double horizontal wires. The use of V-shaped vertical wires is optional.

## 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 10021, *General technical delivery conditions for steel products*

EN 10204, *Metallic products — Types of inspection documents*

EN 10218-1, *Steel wire and wire products — General — Part 1: Test methods*

EN 10218-2:2012, *Steel wire and wire products — General — Part 2: Wire dimensions and tolerances*

EN 10244-2:2009, *Steel wire and wire products — Non-ferrous metallic coatings on steel wire — Part 2: Zinc or zinc alloy coatings*

EN 10245-1, *Steel wire and wire products — Organic coatings on steel wire — Part 1: General rules*

EN 10245-2, *Steel wire and wire products — Organic coatings on steel wire — Part 2: PVC finished wire*

EN 10245-3, *Steel wire and wire products — Organic coatings on steel wire — Part 3: PE coated wire*

EN 10245-4, *Steel wire and wire products — Organic coatings on steel wire — Part 4: Polyester coated wire*

EN ISO 1461, *Hot dip galvanised coatings on fabricated iron and steel articles — Specifications and test methods (ISO 1461)*

EN ISO 4892-1, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance (ISO 4892-1)*

EN ISO 4892-2, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps (ISO 4892-2)*

EN ISO 4892-3, *Plastics — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps (ISO 4892-3)*

EN ISO 6270-1, *Paints and varnishes — Determination of resistance to humidity — Part 1: Continuous condensation (ISO 6270-1)*

EN ISO 6988, *Metallic and other non-organic coatings — Sulfur dioxide test with general condensation of moisture (ISO 6988)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227)*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **welded panels**

panels of various shape and design, made by electrically resistant welding at each wire intersection

Note 1 to entry: The panels can be made out of:

- a) zinc or zinc alloy coated wires (coated before welding);
- b) wires that are subsequently coated after fabrication, either with zinc or zinc alloy.

In either a) or b) the panels may be subsequently organically coated.

#### 3.2

##### **mesh size**

distance measured between the centres of two neighbouring wires

Note 1 to entry: Depending on the application, the mesh size can be uniform throughout the panel or varying. A uniform panel is shown in Figure 1.