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Tråd och trådprodukter av stål – Ståltråd med organisk beläggning – Del 1: Allmänna bestämmelser

Steel wire and wire products – Organic coatings on steel wire – Part 1: General rules

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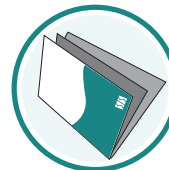
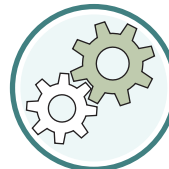
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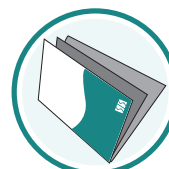
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Denna standard ersätter SS-EN 10245-1, utgåva 1.

The European Standard EN 10245-1:2011 has the status of a Swedish Standard. This document contains the official version of EN 10245-1:2011.

This standard supersedes the Swedish Standard SS-EN 10245-1, edition 1.

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EUROPEAN STANDARD

EN 10245-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2011

ICS 25.220.60; 77.140.65

Supersedes EN 10245-1:2001

English Version

Steel wire and wire products - Organic coatings on steel wire - Part 1: General rules

Fils et produits tréfilés en acier - Revêtements organiques
sur fils d'acier - Partie 1: Principes généraux

Stahldraht und Drahterzeugnisse - Organische
Beschichtungen auf Stahldraht - Teil 1: Allgemeine Regeln

This European Standard was approved by CEN on 17 September 2011.

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.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 10245-1:2011) 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 April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

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 10245-1:2001.

This standard is made up of the following parts:

- *Part 1: General Rules;*
- *Part 2: PVC finished wire;*
- *Part 3: PE coated wire;*
- *Part 4: Polyester coated wire;*
- *Part 5: Polyamide coated wire.*

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

Introduction

This European Standard for organic coatings for steel wire covers the requirements of a general nature and applies also to coatings for which no specific requirements have been established in the subsequent parts of this standard.

The subsequent parts of this standard deal more specifically with clearly defined coatings or groups of coatings. These coatings may have their own particular methods of application and their individual requirements which are specified in these parts of this standard, in other standards or in manufacturers data sheets.

Because the standard specifies requirements and tests not only for the coating but also for the coating material, it has proved not practical to put all the requirements in one clause and all the tests in another one. Following structure has been chosen in order to limit complexity and to facilitate the use.

In writing this series of standards consideration has been given to the nomenclature and transformation of organic coating materials as applied to steel wire products. These organic coating materials may, on application to wire and by their integration into the finished wire product, change their characteristics and properties.

This standard specifies characteristics and tests not only for the organic coating but also for the coating materials both before and after their application to steel wire and wire products. In addition it specifies the requirements for performance levels and testing methods on organic coating material which have become an integral and permanent part of the finished wire product. Therefore it has proven not to be practical to put all requirements in one clause and all the tests in another one.

To aid continuity and in order to limit complexity, the following structure has been chosen for this standard:

- **Clause 4** deals with the characteristics and testing methods of organic coating material as supplied by the manufacturer for the purposes of its application to the wire product.

Tests described in this section are intended to be carried out by the organic coating material manufacturer or the applicator **before** the coating operation.

- **Clause 5** relates to the characteristics and testing methods for the "organic coating" when the organic coating material has been applied to and has become an integral part of the finished wire. Consequently tests are intended to be in the main carried out by the coating "applicators".

- **Clause 6** defines the performance requirements and testing methods on the "organic coating" of the finished wire product, and where this is not possible, tests will be carried out on "coated" panels.

1 Scope

This European Standard specifies the requirements for the characteristics and testing methods for organic coatings made of organic coating material suitable for the application on to steel wire and wire products of circular or other sections.

Other organic materials which are applied intentionally or otherwise such as oils, greases, waxes and temporary finishes which do not become integral or a permanent part of the finished wire product are excluded from this standard

This European Standard is divided in a number of parts, with Part 1 covering the requirements of a general nature and applies to organic coatings and coating material for which no specific requirements have been established in the subsequent parts of prEN 10245.

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.

EN 10021:2006, *General technical delivery conditions for steel products*

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

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

EN 50395, *Electrical test methods for low voltage energy cables*

EN 50396, *Non electrical test methods for low voltage energy cables*

EN ISO 105-A08:2002, *Textiles — Tests for colour fastness — Part A08: Vocabulary used in colour measurement (ISO 105-A08:2001)*

EN ISO 527-1, *Plastics — Determination of tensile properties — Part 1: General principles (ISO 527-1:1993 including Corr 1:1994)*

EN ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994)*

EN ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

EN ISO 877 (all parts), *Plastics — Methods of exposure to solar radiation*

EN ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1:2004)*

EN ISO 1183-2, *Plastics — Methods for determining the density of non-cellular plastics — Part 2: Density gradient column method (ISO 1183-2:2004)*

EN ISO 1183-3, *Plastics — Methods for determining the density of non-cellular plastics — Part 3: Gas pycnometer method (ISO 1183-3:1999)*

EN ISO 2808, *Paints and varnishes — Determination of film thickness (ISO 2808:2007)*

EN ISO 2811-1, *Paints and varnishes — Determination of density — Part 1: Pycnometer method (ISO 2811-1:2011)*

EN ISO 2811-2, *Paints and varnishes — Determination of density — Part 2: Immersed body (plummet) method (ISO 2811-2:2011)*

EN ISO 2811-3, *Paints and varnishes — Determination of density — Part 3: Oscillation method (ISO 2811-3:2011)*

EN ISO 2811-4, *Paints and varnishes — Determination of density — Part 4: Pressure cup method (ISO 2811-4:2011)*

EN ISO 2813, *Paints and varnishes — Determination of specular gloss of non-metallic paint films at 20°, 60° and 85° (ISO 2813:1994, including Technical Corrigendum 1:1997)*

EN ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints (ISO 3668:1998)*

EN ISO 4892-1, *Plastics — Methods of exposure to laboratory light sources — Part 1: General guidance (ISO 4892-1:1999)*

EN ISO 4892-2, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc lamps (ISO 4892-2:2006)*

EN ISO 4892-3, *Plastics — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps (ISO 4892-3:2006)*

EN ISO 6270-1, *Paints and varnishes — Determination of resistance to humidity — Part 1: Continuous condensation (ISO 6270-1:1998)*

EN ISO 6270-2, *Paints and varnishes — Determination of resistance to humidity — Part 2: Procedure for exposing test specimens in condensation-water atmospheres (ISO 6270-2:2005)*

EN ISO 6988, *Metallic and other non-organic coatings — Sulfur dioxide test with general condensation of moisture (ISO 6988:1985)*

EN ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests (ISO 9227:2006)*

ISO 1512, *Paints and varnishes — Sampling of products in liquid or paste form*

ISO 4582, *Plastics — Determination of changes in colour and variations in properties after exposure to daylight under glass, natural weathering or laboratory light sources*

ISO 7724-2, *Paints and varnishes — Colorimetry — Part 2: Colour measurement*

ISO 7724-3, *Paints and varnishes — Colorimetry — Part 3: Calculations of colour differences*

3 Terms and definitions

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

3.1

organic coating

layer of organic coating material when deposited intentionally onto the wire/wire product substrate in a clearly specified manner

NOTE On becoming an integral part of the wire product the "organic coating" will impart specific functional and performance characteristics. The organic coating material may be applied directly to the surface of the steel wire or subsequent to a pre-treatment of the steel wire surface with a primary coating which can consist of inorganic or organic materials. For the purpose of this definition the steel wire/wire product may be coated with a non-ferrous metallic coating or not.

3.2

organic coating material

material made essentially of organic compounds capable of covering the steel wire surface after suitable preparation

NOTE The "organic coating materials" generally contain other matter such as pigments, fillers, plasticisers, lubricants and other additives which are specific to each organic coating material composition.