

<b>STN</b>	<b>Elektrolyticky vylúčené povlaky zliatiny cínu a niklu. Špecifikácia a skúšobné metódy (ISO 2179:1986).</b>	<b>STN EN ISO 2179</b>  03 8537
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Electroplated coatings of tin-nickel alloy - Specification and test methods (ISO 2179:1986)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/16

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EUROPEAN STANDARD

**EN ISO 2179**

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English Version

## Electroplated coatings of tin-nickel alloy - Specification and test methods (ISO 2179:1986)

Dépôts électrolytiques d'alliage étain-nickel -  
Spécifications et méthodes d'essai (ISO 2179:1986)

Elektrolytisch hergestellte Überzüge aus einer Zinn-  
Nickel-Legierung - Anforderungen und Prüfverfahren  
(ISO 2179:1986)

This European Standard was approved by CEN on 2 April 2016.

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

The text of ISO 2179:1986 has been prepared by Technical Committee ISO/TC 107 “Metallic and other inorganic coatings” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 2179:2016 by Technical Committee CEN/TC 262 “Metallic and other inorganic coatings” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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.

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.

### Endorsement notice

The text of ISO 2179:1986 has been approved by CEN as EN ISO 2179:2016 without any modification.

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International Standard



2179

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## Electroplated coatings of tin-nickel alloy — Specification and test methods

*Dépôts électrolytiques d'alliage étain-nickel — Spécifications et méthodes d'essai*

**Second edition — 1986-12-15**

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**UDC 669.65'24.87**

**Ref. No. ISO 2179-1986 (E)**

**Descriptors :** metal coatings, electrodeposited coatings, tin coatings, nickel coating, classifications, specifications, tests, determination, thickness.

## 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 2179 was prepared by Technical Committee ISO/TC 107, *Metallic and other non-organic coatings*.

This second edition cancels and replaces the first edition (ISO 2179-1972), of which it constitutes a technical revision.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

# Electroplated coatings of tin-nickel alloy — Specification and test methods

## 0 Introduction

This International Standard specifies requirements for electroplated coatings of the intermetallic compound SnNi of the approximate composition 65 % (m/m) tin and 35 % (m/m) nickel. Such coatings are generally recognized as being hard, wear-resistant and corrosion resistant.

The coatings are intended for use on both ferrous and non-ferrous basis metals and also on printed circuit boards. A classification scheme is included by which the nature of the basis metal and undercoat, if any, and the coating thickness can be defined.

Annex B gives additional information as guidance to the user.

**It is essential that the purchaser should state the information itemized in 4.1 and, if appropriate, 4.2. Specifying ISO 2179 without this information is insufficient.**

## 1 Scope and field of application

This International Standard specifies requirements for electroplated coatings of the intermetallic compound SnNi, with a composition of approximately 65 % (m/m) tin and 35 % (m/m) nickel.

It does not apply to

- a) threaded components;
- b) coatings on sheet, strip or wire in the unfabricated form, or on articles made from them;
- c) coatings on coil springs;
- d) electroplating of steels with tensile strength greater than 1 000 MPa<sup>1)</sup> (or of corresponding hardness), because such steels are subject to hydrogen embrittlement (see 8.2).

## 2 References

ISO 1462, *Metallic coatings — Coatings other than those anodic to the basis metal — Accelerated corrosion tests — Method for the evaluation of the results.*

ISO 1463, *Metallic and oxide coatings — Measurement of coating thickness — Microscopical method.*

ISO 2064, *Metallic and other non-organic coatings — Definitions and conventions concerning the measurement of thickness.*

ISO 2177, *Metallic coatings — Measurement of coating thickness — Coulometric method by anodic dissolution.*

ISO 2819, *Metallic coatings on metallic substrates — Electrodeposited and chemically deposited coatings — Review of methods available for testing adhesion.*

ISO 2859, *Sampling procedures and tables for inspection by attributes.*<sup>2)</sup>

ISO 3497, *Metallic coatings — Measurements of coating thickness — X-ray spectrometric methods.*

ISO 3543, *Metallic and non-metallic coatings — Measurements of thickness — Beta backscatter method.*

ISO 4519, *Electrodeposited metallic coatings and related finishes — Sampling procedures for inspection by attributes.*

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

**konec náhľadu – text ďalej pokračuje v platenej verzii STN**

1) 1 MPa = 1 N/mm<sup>2</sup>

2) At present at the stage of draft.