



SLOVENSKI STANDARD SIST EN ISO 14916:2017

01-junij-2017

Nadomešča:
SIST EN 582:1999

Vroče brizganje - Ugotavljanje adhezijske natezne trdnosti (ISO 14916:2017)

Thermal spraying - Determination of tensile adhesive strength (ISO 14916:2017)

Thermisches Spritzen - Ermittlung der Haftzugfestigkeit (ISO 14916:2017)

Projection thermique - Mesure de l'adhérence par essais de traction (ISO 14916:2017)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN ISO 14916:2017

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4e7907d3/sist-en-iso-14916-2017>

ICS:

25.220.20	Površinska obdelava	Surface treatment
-----------	---------------------	-------------------

SIST EN ISO 14916:2017

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 14916:2017

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 14916

March 2017

ICS 25.220.20

Supersedes EN 582:1993

English Version

Thermal spraying - Determination of tensile adhesive strength (ISO 14916:2017)

Projection thermique - Mesure de l'adhérence par essais de traction (ISO 14916:2017)

Thermisches Spritzen - Ermittlung der Haftzugfestigkeit (ISO 14916:2017)

This European Standard was approved by CEN on 8 March 2017.

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

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>



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

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

Contents	Page
European foreword.....	3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 14916:2017
<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>

European foreword

This document (EN ISO 14916:2017) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" in collaboration with Technical Committee CEN/TC 240 "Thermal spraying and thermally sprayed coatings" 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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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 582:1993.

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.

STANDARD PREVIEW
(standards.iteh.ai)

Endorsement notice

The text of ISO 14916:2017 has been approved by CEN as EN ISO 14916:2017 without any modification.

SIST EN ISO 14916:2017
<https://standards.iteh.ai/catalog/standards/sist/bc070802-3526-465d-994d-304e4c7907d3/sist-en-iso-14916-2017>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 14916:2017

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>

INTERNATIONAL STANDARD

**ISO
14916**

Second edition
2017-03

Thermal spraying — Determination of tensile adhesive strength

Projection thermique — Mesure de l'adhérence par essais de traction

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 14916:2017](https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017)

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>



Reference number
ISO 14916:2017(E)

© ISO 2017

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 14916:2017

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principles	2
5 Equipment for testing and measuring and auxiliary equipment	3
5.1 Test instruments.....	3
5.2 Measurement instrument.....	3
5.3 Specimen fixing device for bonding of the tensile adhesive specimen.....	4
6 Specimens	4
6.1 Shape of specimens.....	4
6.2 Material of the specimen.....	6
6.3 Preparing the substrate and loading blocks.....	6
6.4 Preparing and spraying of the specimen.....	8
6.5 Manufacture of the specimens for tensile testing.....	9
6.5.1 Machining of the coated substrate block (or test disc) and preparation for bonding.....	9
6.5.2 Gluing the specimen.....	9
6.5.3 Bonding agent.....	9
6.6 Reference specimen.....	10
6.7 Number of specimens to be tested.....	10
7 Applying the testing	10
8 Measurement readings and evaluation	11
9 Test report — Documentation	12
10 Possible sources of fault when preparing the specimens and on testing	13
Annex A (informative) Work instructions for gluing	14
Annex B (informative) Recommendations for further auxiliary equipment	17
Annex C (informative) Function areas on the tensile adhesive specimen and possibilities of fracture locations according to ASTM C633-13	21
Annex D (informative) Record for the applied tensile adhesive test according to this document	22
Bibliography	26

ISO 14916:2017(E)

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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*.

This second edition cancels and replaces the first edition (ISO 14916:1999), which has been technically revised.

Introduction

The determination of the tensile adhesive strength of a thermal spray coating can play an important role in the quality control of production. Deviations from the normal and qualified procedure can be recognized when preparing and spraying a component.

If the fracture occurs cohesively in the coating when applying the tensile adhesive strength test, the coating's strength in the direction normal to the surface is supplied. Influences of variations in spray conditions can be identified via proper interpretation of tensile test results. Microscopic investigations of the fractured surface can supply further information for judging the quality of the coating's structure.

A revision of the existing document had been required as a result of the identification of significant influences on the test results caused by the tensile test bonding procedure and by the properties of the adhesive itself. These findings were not adequately covered in the previous version of this document.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 14916:2017](https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017)

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 14916:2017

<https://standards.iteh.ai/catalog/standards/sist/bc070802-332b-463d-994d-304e4c7907d3/sist-en-iso-14916-2017>