

SLOVENSKI STANDARD

SIST EN ISO 28199-3:2010

01-januar-2010

6 Ufj Y]b ``U_!`JfYXbchYb`Y`Uglbcgh`dfYa Uhb] `g]ghYa cj `df]`bUbUyUb! !` "XY.
J]ni Ubcb`cWb`Yj Ub`Ydc`nYb`Udc`Uj Ua Y i f _cj Z`i _b`W]b`_f]lbcgh`f`GC`&, % - !
.```-Ł

Paints and varnishes - Evaluation of properties of coating systems related to the application process - Part 3: Visual assessment of sagging, formation of bubbles, pinholing and hiding power (ISO 28199-3:2009)

iTeh STANDARD PREVIEW

Beschichtungsstoffe - Beurteilung von applikationsbedingter Eigenschaften von Beschichtungssystemen - Teil 3: Visuelle Beurteilung von Ablaufneigung, Kocherbildung, Nadelstichbildung und Deckvermögen (ISO 28199-3:2009)

[SIST EN ISO 28199-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28>

Peintures et vernis - Évaluation des propriétés des systèmes de revêtement liées au mode d'application - Partie 3: Évaluation visuelle du festonnage, de la formation de bulles, des piqûres et du pouvoir masquant (ISO 28199-3:2009)

Ta slovenski standard je istoveten z: EN ISO 28199-3:2009

ICS:

87.040

Barve in laki

Paints and varnishes

SIST EN ISO 28199-3:2010

en,fr,de

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 28199-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 28199-3

September 2009

ICS 87.040

English Version

Paints and varnishes - Evaluation of properties of coating systems related to the application process - Part 3: Visual assessment of sagging, formation of bubbles, pinholing and hiding power (ISO 28199-3:2009)

Peintures et vernis - Évaluation des propriétés des systèmes de revêtement liées au mode d'application - Partie 3: Évaluation visuelle du festonnage, de la formation de bulles, des piqûres et du pouvoir masquant (ISO 28199-3:2009)

Beschichtungsstoffe - Beurteilung von applikationsbedingter Eigenschaften von Beschichtungssystemen - Teil 3: Visuelle Beurteilung von Ablaufneigung, Kocherbildung, Nadelstichbildung und Deckvermögen (ISO 28199-3:2009)

This European Standard was approved by CEN on 21 May 2009.

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 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 Management Centre has the same status as the official versions.

<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28->

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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 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

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 28199-3:2010](#)
<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010>

Foreword

This document (EN ISO 28199-3:2009) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" 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 March 2010, and conflicting national standards shall be withdrawn at the latest by March 2010.

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, 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.

iTeh STANDARD REVIEW

Endorsement notice

(standards.iteh.ai)

The text of ISO 28199-3:2009 has been approved by CEN as a EN ISO 28199-3:2009 without any modification.

[SIST EN ISO 28199-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010>

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 28199-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010>

INTERNATIONAL
STANDARD

ISO
28199-3

First edition
2009-09-01

**Paints and varnishes — Evaluation of
properties of coating systems related to
the application process —**

Part 3:

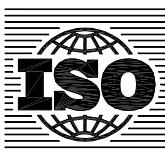
**Visual assessment of sagging, formation
of bubbles, pinholing and hiding power**

iTeh STANDARD PREVIEW

(standards.iteh.ai)
Peintures et vernis — Évaluation des propriétés des systèmes de revêtement liées au mode d'application —

Partie 3: Évaluation visuelle du festonnage, de la formation de bulles,
des piqûres et du pouvoir masquant

[https://standards.iteh.ai/catalog/standards/sist/253add58-1217-4500-bb28-
d5d81cca1607/sist-en-iso-28199-3-2010](https://standards.iteh.ai/catalog/standards/sist/253add58-1217-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010)



Reference number
ISO 28199-3:2009(E)

© ISO 2009

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 28199-3:2010](#)

<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references.....	1
3 Terms and definitions	1
4 Tendency toward sagging	1
4.1 General	1
4.2 Evaluation.....	3
5 Bubbles.....	3
5.1 General	3
5.2 Evaluation.....	3
6 Pinholing	3
6.1 General	3
6.2 Evaluation.....	3
7 Process hiding power.....	3
7.1 General	3
7.2 Evaluation.....	4
8 Test report.....	4
Annex A (informative) Examples of bubbles, pinholes and craters.....	5

SIST EN ISO 28199-3:2010
<https://www.iteh.ai/catalog/standards/iso/iso-28199-3-2010-2017-4500-11-28-d5d81cca1607/sist-en-iso-28199-3-2010>

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 28199-3 was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

iTeh STANDARD PREVIEW

ISO 28199 consists of the following parts, under the general title *Paints and varnishes — Evaluation of properties of coating systems related to the application process*:
[\(standards.iteh.ai\)](https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010)

- *Part 1: Relevant vocabulary and preparation of test panels*
[SIST EN ISO 28199-3:2010](https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010)
- *Part 2: Colour stability, process hiding power, re-dissolving, overspray absorption, wetting, surface texture and mottling*
<https://standards.iteh.ai/catalog/standards/sist/253add58-12f7-4500-bb28-d5d81cca1607/sist-en-iso-28199-3-2010>
- *Part 3: Visual assessment of sagging, formation of bubbles, pinholing and hiding power*

Introduction

In many areas (e.g. car manufacture, industrial coatings, coatings for plastics) the coating materials used are adapted to the specific application equipment and technologies of the particular user. A coating material is, therefore, to be understood as a semi-manufactured product that only receives its final form in combination with the specific application conditions. The adaptation to the application conditions is therefore decisive for the quality of the coated product.

The test methods specified in ISO 28199 are based on studies by a Working Group of the European Council for Automotive R&D (EUCAR).

They may be used for evaluation of coating materials in research, development and production with regard to their suitability and safety for industrial processes, and error analysis. The properties of coating materials and coatings to be evaluated depend on the film thickness, so a coating system of increasing thickness is applied to a test panel under defined conditions.

The following characteristics are measured (in ISO 28199-1):

- film thickness in accordance with ISO 2808;
- surface texture; **iTeh STANDARD PREVIEW**
(standards.iteh.ai)
- colour in accordance with ISO 7724 (all parts)

In combination with visual assessment, the following properties are determined:

- colour stability, process hiding power, re-dissolving, overspray absorption, wetting, surface texture and mottling (ISO 28199-2);
- tendency toward sagging, formation of bubbles, pinholing and hiding power (this part of ISO 28199).