



**International  
Standard**

**ISO 10216**

**Anodizing of aluminium and  
its alloys — Instrumental  
determination of image clarity  
of anodic oxidation coatings —  
Instrumental method**

*Anodisation de l'aluminium et de ses alliages — Détermination  
de la netteté d'image sur couches anodiques — Méthode  
instrumentale*

**Fourth edition  
2024-10**

[ISO 10216:2024](https://standards.iteh.ai/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024)

<https://standards.iteh.ai/catalog/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024>

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

[ISO 10216:2024](https://standards.iteh.ai/catalog/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024)

<https://standards.iteh.ai/catalog/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, 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  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Principle</b> .....	<b>2</b>
<b>5 Apparatus</b> .....	<b>2</b>
<b>6 Test specimen</b> .....	<b>4</b>
6.1 Sampling.....	4
6.2 Size.....	4
6.3 Treatment before measurement.....	4
<b>7 Procedure</b> .....	<b>5</b>
7.1 Measurement of black glass.....	5
7.2 Sensitivity adjustment by test specimen.....	5
7.3 Measurement of test specimen.....	5
<b>8 Expression of results</b> .....	<b>5</b>
8.1 Calculation of image clarity, $C_n$ .....	5
8.2 Image clarity.....	7
8.3 Image clarity comparison and classification.....	7
8.4 Optical evenness, $E$ .....	7
8.5 Dispersion of light, $D$ .....	7
<b>9 Test report</b> .....	<b>8</b>
<b>Bibliography</b> .....	<b>9</b>

[ISO 10216:2024](https://standards.iteh.ai/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024)

<https://standards.iteh.ai/catalog/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024>

## 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 document 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](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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

For an explanation of 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 79, *Light metals and their alloys*, Subcommittee SC 2, *Organic and anodic oxidation coatings on aluminium*.

This fourth edition cancels and replaces the third edition (ISO 10216:2017), which has been technically revised.

The main changes compared to the previous edition are as follows:

- the light source and photometer have been revised;
- the light source in the test report has been added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

The clarity of images of anodic oxidation coatings on aluminium and its alloys is normally estimated visually: by observing the clearness of an image on the surface. However, the image can be observed at various angles and can therefore be confused with the gloss level of a surface. While the degree of image clarity is mainly influenced by the clearness of the coating, it is also affected by image distortion caused by surface irregularities and the haziness of the coating layer.

This document specifies the use of an instrumental method for measuring image clarity using an optical comb. A related document, ISO 10215, specifies the use of a chart scale which is also based on an optical comb together with a lightness scale to rank image clarity.

NOTE This instrumental method provides more accurate measurements of image clarity than visual evaluation and can be used in cases of dispute.

iTeh Standards  
(<https://standards.iteh.ai>)  
Document Preview

[ISO 10216:2024](https://standards.iteh.ai/catalog/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024)

<https://standards.iteh.ai/catalog/standards/iso/83bccc3e-59b9-41ac-beca-95253cd68eda/iso-10216-2024>

