

---

---

## Light conveyor belts — Determination of electrical resistances

*Courroies transporteuses légères — Détermination des résistances  
électriques*

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

[ISO 21178:2020](https://standards.iteh.ai/catalog/standards/iso/bef533f2-2b7f-49d9-ad8e-eef687bf4821/iso-21178-2020)

<https://standards.iteh.ai/catalog/standards/iso/bef533f2-2b7f-49d9-ad8e-eef687bf4821/iso-21178-2020>



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

ISO 21178:2020

<https://standards.iteh.ai/catalog/standards/iso/bef533f2-2b7f-49d9-ad8e-eef687bf4821/iso-21178-2020>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2020

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  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

	Page
Foreword .....	v
<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 Symbols</b> .....	<b>2</b>
<b>5 Electrical surface resistances</b> .....	<b>2</b>
5.1 Method A: Measurement of surface resistance, $R_{OA}$ , omni-directionally .....	2
5.1.1 Applicability .....	2
5.1.2 Principle .....	2
5.1.3 Apparatus (see <a href="#">Figure 1</a> ) .....	2
5.1.4 Test piece .....	4
5.1.5 Procedure .....	5
5.1.6 Expression of results .....	6
5.1.7 Test report .....	6
5.2 Method B: Measurement of surface resistance $R_{OB}$ in longitudinal and transverse directions .....	6
5.2.1 Applicability .....	6
5.2.2 Principle .....	6
5.2.3 Apparatus (see <a href="#">Figure 4</a> ) .....	6
5.2.4 Test piece .....	8
5.2.5 Procedure .....	9
5.2.6 Expression of results .....	9
5.2.7 Test report .....	9
<b>6 Electrical surface resistivity <math>\rho_s</math></b> .....	<b>10</b>
6.1 General .....	10
6.2 Principle .....	10
6.3 Apparatus .....	11
6.4 Test piece .....	12
6.4.1 Material .....	12
6.4.2 Dimensions .....	12
6.4.3 Number .....	12
6.4.4 Cleaning .....	12
6.4.5 Conditioning .....	12
6.4.6 Preparation .....	12
6.5 Procedure .....	12
6.6 Expression of results .....	13
6.7 Test report .....	13
<b>7 Electrical volume resistances</b> .....	<b>13</b>
7.1 Volume resistance, $R_D$ , perpendicular to plane of belt .....	13
7.1.1 Principle .....	13
7.1.2 Apparatus .....	13
7.1.3 Test piece .....	14
7.1.4 Procedure .....	15
7.1.5 Expression of results .....	15
7.1.6 Test report .....	15
7.2 Volume resistance, $R_{Di}$ , in longitudinal and transverse directions parallel to plane of belt .....	16
7.2.1 Principle .....	16
7.2.2 Apparatus .....	16
7.2.3 Test piece .....	17
7.2.4 Procedure .....	18
7.2.5 Expression of results .....	19

7.2.6	Test report.....	19
<b>8</b>	<b>Electrical volume resistivity, <math>\rho_D</math></b> .....	<b>19</b>
8.1	Procedure.....	19
8.2	Expression of results.....	19
8.3	Test report.....	20
	<b>Bibliography</b> .....	<b>21</b>

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

[ISO 21178:2020](https://standards.itih.ai/catalog/standards/iso/bef533f2-2b7f-49d9-ad8e-eef687bf4821/iso-21178-2020)

<https://standards.itih.ai/catalog/standards/iso/bef533f2-2b7f-49d9-ad8e-eef687bf4821/iso-21178-2020>