

---

---

**Fibre ropes — Determination of  
certain physical and mechanical  
properties**

*Cordages en fibres — Détermination de certaines caractéristiques  
physiques et mécaniques*





**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2019

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
<b>Foreword</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>
4.1 Calculation of the linear density.....	2
4.2 Measurement of the diameter, lay length and braid pitch.....	2
4.3 Measurement of the elongation of the rope.....	2
4.4 Measurement of the breaking force.....	2
<b>5 Apparatus</b> .....	<b>2</b>
<b>6 Sampling</b> .....	<b>3</b>
6.1 Composition of the batch to be sampled.....	3
6.2 Sample size.....	3
6.3 Selection of samples.....	3
<b>7 Test pieces for tensile testing and force-elongation measurements</b> .....	<b>3</b>
7.1 Length.....	3
7.2 Number of test pieces.....	3
7.3 Taking the test pieces.....	3
<b>8 Conditioning</b> .....	<b>4</b>
<b>9 Procedure</b> .....	<b>4</b>
9.1 General.....	4
9.2 Initial measurements.....	4
9.3 Mounting the test piece on the testing machine.....	4
9.4 Measurement of diameter, lay length or braid pitch and gauge length.....	6
9.5 Bedding-in of the test piece.....	7
9.6 Measurement of the elongation of the rope.....	8
9.7 Measurement of the breaking force.....	8
<b>10 Linear density</b> .....	<b>8</b>
<b>11 Expression of results</b> .....	<b>9</b>
11.1 General.....	9
11.2 Linear density, $\rho_1$ .....	9
11.3 Diameter, lay length or braid pitch.....	9
11.4 Elongation.....	9
11.5 Actual breaking force.....	10
<b>12 Determination of water repellency</b> .....	<b>10</b>
12.1 General.....	10
12.2 Principle.....	10
12.3 Test pieces.....	10
12.3.1 General.....	10
12.3.2 Whipping.....	10
12.3.3 Cutting the samples.....	10
12.3.4 Sealing.....	10
12.4 Procedure.....	11
12.4.1 First weighing.....	11
12.4.2 Second weighing.....	11
12.4.3 Third weighing.....	11
12.4.4 Drying the specimens.....	11
12.4.5 Fourth, fifth and sixth weighing.....	11
12.5 Results of tests.....	11