

This is a preview of "ISO 6722-1:2011". [Click here to purchase the full version from the ANSI store.](#)

Fourth edition  
2011-10-15

---

---

## Road vehicles — 60 V and 600 V single-core cables —

### Part 1: Dimensions, test methods and requirements for copper conductor cables

*Véhicules routiers — Câbles monoconducteurs de 60 V et 600 V —*

*Partie 1: Dimensions, méthodes d'essai et exigences pour les câbles conducteurs en cuivre*



Reference number  
ISO 6722-1:2011(E)

© ISO 2011

This is a preview of "ISO 6722-1:2011". [Click here to purchase the full version from the ANSI store.](#)



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2011

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 6722-1:2011". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

Foreword .....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions .....</b>	<b>2</b>
<b>4 General .....</b>	<b>2</b>
4.1 Safety concerns .....	2
4.2 Temperature classes .....	2
4.3 Conductors .....	3
4.4 Tests .....	3
4.5 General test conditions .....	5
4.6 Ovens .....	5
4.7 Representative conductor sizes for testing .....	5
4.8 Recommended colours .....	5
<b>5 Tests and requirements .....</b>	<b>5</b>
5.1 Outside cable diameter .....	5
5.2 Insulation thickness .....	6
5.3 Conductor diameter .....	8
5.4 Conductor resistance .....	8
5.5 Withstand voltage .....	10
5.6 Insulation faults .....	11
5.7 Insulation volume resistivity .....	12
5.8 Pressure test at high temperature .....	13
5.9 Strip force .....	14
5.10 Low temperature winding .....	15
5.11 Cold impact .....	17
5.12 Abrasion test .....	19
5.13 Long term heat ageing, 3 000 h .....	23
5.14 Short term heat ageing, 240 h .....	24
5.15 Thermal overload .....	25
5.16 Shrinkage by heat .....	26
5.17 Fluid compatibility .....	26
5.18 Durability of cable marking .....	30
5.19 Resistance to ozone .....	30
5.20 Resistance to hot water .....	31
5.21 Temperature and humidity cycling .....	33
5.22 Resistance to flame propagation .....	34
<b>Annex A (informative) Comparison temperature class rating .....</b>	<b>36</b>
<b>Annex B (informative) Construction .....</b>	<b>37</b>
<b>Annex C (informative) Recommended colours .....</b>	<b>40</b>
<b>Annex D (informative) Sources for reference materials .....</b>	<b>41</b>
<b>Bibliography .....</b>	<b>42</b>

## 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 6722-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

This fourth edition of ISO 6722-1 cancels and replaces ISO 6722:2006, which has been technically revised.

ISO 6722 consists of the following parts, under the general title *Road vehicles — 60 V and 600 V single-core cables*:

- *Part 1: Dimensions, test methods and requirements for copper conductor cables*
- *Part 2: Dimensions, test methods and requirements for aluminium conductor cables*<sup>1)</sup>

---

1) To be published.