

# CERTIFICATION Notice

An Urgent Bulletin from CSA International

## Wire and Cable No. 158

(Supersedes Notice, Wire & Cable No. 128, Ref N06-056 and  
Informs Wire & Cable No. 140, Ref N08-060)

Effective Date: November 15, 2011

Date: December 7, 2010

Apply Before May 31, 2011

Announcing: Publication of the 13th Edition of CSA Standard C22.2 No 49-10, Flexible cords and cables (Tri-national standard, with UL 62 and ANCE NMX-J-436)

See Attachment 1 for affected Class Numbers.

To purchase the Standard, visit us at [www.shopcsa.ca](http://www.shopcsa.ca)

### Who is affected?

Manufacturers of Flexible Cords.

### What do you do?

1. CSA International Service Delivery staff will contact you to address compliance with each revision as applicable to the product designs covered in your affected Certification Reports. In addition to updates to your Certificate(s) of Compliance & Report(s), testing may be required to comply with these revisions.
2. Please respond within thirty (30) days of receiving CSA International's "Application for CSA Certification Services" and "Quotation" communication. You must respond no later than May 31, 2011 in order to guarantee the update to your certification is completed by November 15, 2011. If testing is needed, we will inform you of the samples required.

### Approvals:

Customers who presently hold CSA Certification of Flexible cord types TST, TPT, shaver cord<sup>u</sup>, HPD<sup>u</sup>, PD<sup>u</sup>, C<sup>u</sup>, XTW<sup>u</sup> and CXTW<sup>u</sup> SPE-2<sup>u</sup> TX<sup>c</sup>, NISPT-1, NISP-1, NISPE-1 are required to make application to document compliance to the new requirements noted as "New Requirements" in attachment 1. Customers who wish to take advantage of the new construction features ("-R" rated cords) detailed in Attachment 2 may make application at any time.

### Major Revisions:

Cords with a '-R' suffix for use as a power-supply cord on cord-connected portable appliances are now available in this standard. Types HSJOW and HSJOOW have been added for the US only.

### Background and Rationale:

CSA Standard C22.2 No. 49-10 (Thirteenth Edition) was prepared at the request of industry. This edition of CSA C22.2 No. 49-10 supersedes the previous edition published in 2006.

For questions specific to your file or products contact your regular CSA International engineering staff.

Go to <http://directories.csa-international.org/> and enter your Master Contract # and the class numbers associated with this Notice to determine which of your products are affected.

### For technical questions on this Certification Notice

Contact Todd Hamden  
by phone 416.747.2225, fax 416.401.6533  
or e-mail [todd.hamden@csa-international.org](mailto:todd.hamden@csa-international.org)

In the event your models do not comply with the effective standards, arrangements must be made to bring them into compliance.

In the event we do not receive a response as to your currently certified models, prior to the above applicable effective date(s), the certification of such models will be discontinued.



Visit us at [www.csa-international.org](http://www.csa-international.org) Click on "Contact Us" for the online phone listing of our Offices and Partners

# ATTACHMENT 1

## Affected Class Numbers

Class No:

5831 01, WIRES - Flexible Cord

5831 81, WIRES - Flexible Cord - Certified to US Standards

# ATTACHMENT 2

## Approvals

CSA Std C22.2 No. 49-10		CSA Std C22.2 No. 49-06	
Clause	Title and comment	Clause	Title and comment
<i>Many Places in New edition</i>	<i>Reference to CSA Standard C22.2 No 0.3 removed and reference added to Jacket Materials Tests - Thickness, in CSA C22.2 No.2556 Standard</i>	<i>Many Places in standard</i>	<i>Reference to CSA Standard C22.2 No 0.3</i>
<b>1</b>	<b>Scope</b>		
<b>1.1</b>	<b>No changes</b>	1.1	
<b>3</b>	<b>Definitions</b>		
3.1	Tinsel cord — New Definition added and old wording was relocated to Construction under General.  “cords intended for use only in lengths that do not exceed 2.4 m (8 ft) where they are attached either directly or by means of a special type of attachment plug to a portable electric appliance rated at 0.5 A or less.”  No change in requirement.	2.1	Previous Definition – “a very flexible cord in which each conductor comprises a number of strands or group of strands, twisted together, each strand being composed of one or more flattened wires of copper or copper alloy, helically wound on a thread of cotton, polyamide, or similar material.”
<b>4.0</b>	<b>Construction</b>		

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
4.1.1.7.2.2	New clause 4.1.1.7.2.2 The maximum acceptable length of lay of strands of a 22AWG conductor used in Type CXTW or XTW shall meet the requirements in Table 3 or shall be based on the performance of the finished type in the abrasion and flexing test described in Clauses 5.1.20 and 5.1.21 respectively  <i>Old clause moved to 4.1.1.7.2.3</i>	Minor change (easement)	4.1.1.7.2.2	Same clause as in 4.1.1.7.2.3 of new edition
4.1.2.2	New Materials: <b>Removed</b> <b>"Note: In Canada, requirements for evaluation of new insulating materials are under development."</b>	Minor change (easement)	4.1.2.2	Previous method not yet established for New materials. C22.2 No 2556 now provides test methods for evaluation of new materials.
4.1.9	Method of distinguishing conductors Annex D moved to Annex B	No change relocation only	4.1.9	Other acceptable methods of colour coding the individual conductors were shown in Annex D
4.2.12	Insulated conductor identification – Removed this redundant clause. See clause 4.1.9 and Appendix B	No change	4.2.12	Insulated conductor identification shall comply with Clause 4.1.9.
4.2.12	New section added for Cords with an □-R□ suffix for use as a power-supply cord on cord-connected portable appliances – Tests; <i>Abrasion, Mandrel Pinching, Mandrel Crushing, Flexing</i>  <b>Not applicable for Canada or Mexico</b>	New Requirements applicable to 18-14AWG, 300V only  <b>(Customers required to submit for approval)</b>	-	-
4.3.9.5	Thicknesses deleted requirements removed from this clause and moved into tables 18-19.	No change relocation only	4.3.9.5	<i>Figures 5 and 6. The thickness (see A in Figure 5) of the complete insulation shall not be less than 2.54 mm (0.100 in) at any point .....</i>

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
4.3.14.1	<p>Added Cords marked with the –R suffix as indicated in 6.2.4 g) shall comply with the requirements specified for the standard cord construction in addition to those specified in 4.2.12 through 4.2.12.5. Cords marked with –R shall be limited to 18 - 14 AWG, and 300V.</p> <p><i>New Clause added giving direction for Cords with a ‘-R’ suffix for use as a power-supply cord on cord-connected portable appliances</i></p>	<p>New requirements applicable to 18-14AWG, 300V only</p> <p><b>(Customers required to submit for approval)</b></p>	-	-
4.4.6.1	<p>Added section as noted above for “–R” suffix for use as a power-supply cord on cord-connected portable appliances</p>			
4.5.2.1.2	<p>New Flexing Test Requirement for TST, TPT, shaver cord<sup>u</sup> types added. Not in previous edition</p>	<p>New requirements</p> <p><b>(Customers wishing to maintain approval are required to re-submit for approval)</b></p>	-	-
<b>5</b>	<b>Performance and test requirements</b>			
<b>5.1.14</b>	<p><b>New Test:</b> Abrasion test for “-R” cords</p>	<p>New requirements applicable to 18-14AWG, 300V only</p> <p><b>(Customers wishing to maintain approval are required to re-submit for approval)</b></p>	-	-

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
5.1.15	New test for HPD <sup>u</sup> , PD <sup>u</sup> , C <sup>u</sup> types: Flexibility of Braid	New requirements <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
5.1.16	New test added: Mandrel pinching test for “-R” cords	New requirements <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
5.1.17	New test added: Mandrel crushing test for “-R” cords	New requirements applicable to 18-14AWG, 300V only <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
5.1.18	New flexing test for “-R” cords	New requirements applicable to 18-14AWG, 300V only <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
5.1.19	New flexing Test Requirement for TST, TPT, shaver cord <sup>u</sup> types added. Not in previous edition	New requirements <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
5.1.20	New abrasion Test for 22 AWG size of XTW <sup>u</sup> and CXTW <sup>u</sup>	New requirements <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
5.1.21	New flexing test for XTW <sup>u</sup> and CXTW <sup>u</sup>	New Requirements <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
6.4.4 (a)	Type SPE-2 <sup>u</sup> now required to have the marking "For use in general use extension cord sets only" on the tag, reel or carton.	New Requirement (Customers must reply in writing confirming new marking will be performed)	-	Not required for this type in old document
6.4.4 (a)	Types TX <sup>c</sup> , NISPT-1, NISP-1, NISPE-1 now required to have the marking ""Not for sale to the general public"" on the tag, reel or carton.	New Requirement (Customers must reply in writing confirming new marking will be performed)	-	Not required for this type in old document
	<b>TABLES</b>			

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
Table 1	Change requirement from <b>minimum</b> diameter of solid conductors to <b>maximum</b> diameter of solid conductors	Minor change	Table 1	Requirement was Minimum diameter of solid conductors in previous edition
Table 1	Change requirement from Minimum cross-sectional area to Maximum cross-sectional area	Minor change	Table 1	Requirements was Minimum Cross-sectional area in previous edition
Tables 2,3,10,13,25,29,45,46,47	Addition of new Types for <b>US only HSJOW &amp; HSJOOW</b>	New Type (Customers wishing approval for the "US" only are required to make submittal)	Tables	Previous Edition did not have these types.
Table 6	Correction for DC resistance of stranded bare copper conductors at 20C. corrected from 0.680 ohms/1000 ft to 0.690 ohms / 1000 ft.	Correction	Table 6	Previous Edition 0.680 ohms / 1000 ft
Table 10	Correction of size of circuit conductors for TST flexible cords. Corrected from 0.102 mm <sup>2</sup> to 0.100 mm <sup>2</sup>	Correction	Table 10	Previous edition 0.100 mm <sup>2</sup>
Table 14	Correction of size of three conductor parallel; Insulation Thickness minimum at any point before and after separation & minimum distance between conductors for a cord with a grounding conductor, mm (mils)	Correction  (See Table for changes)	Table 14	Previous Edition various mistakes
Table 15	Correction for extra hard usage cords minimum average thickness from 1.68 to 1.65 mm <sup>2</sup>	Correction	Table 51	Previous edition 1.65 mm <sup>2</sup>
Table 17	New test added for special use cords (HPD <sup>u</sup> , PD <sup>u</sup> , C <sup>u</sup> ) "Flexibility of braid"	New Requirements  <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>		

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
Table 18	Correction of size of three conductor parallel; Insulation Thickness minimum at any point before and after separation & minimum distance between conductors for a cord with a grounding conductor, mm (mils)	Correction  (See Table for changes)	Table 18	Previous Edition various mistakes
Table 19	Corrections same as table 18	Same as above	Table 19	Same
Table 20 & 21	Correction to include 0.519mm <sup>2</sup> (20AWG) for NISPT-1	Correction	Table 20	Missing from previous edition
Table 21	Removed Bend Test, nylon covered – no longer applicable to table 21 products.	Minor change (easement)	Table 21	Previous edition required this test on table 21 products
Table 30	Deformation test clause 5.1.3 no longer required for Shaver cords (us only)	Minor change (easement)	Table 30	Previous edition required this test
Table 38	Various Insulation thicknesses for hoist-way cables corrected	Correction  (See Table for changes)	Table 38	Previous Edition various mistakes
Table 42	Clarification to include Number of turns around mandrel (see note 1); <i>(1) The specimen shall be wound six close turns around the mandrel.</i>	Clarification (Not change in method)	Table 42	Number of turns not specified
Table 45	Spark voltages, Changes to include 15AWG sizes	Clarification (Not change in method)	Table 45	15 AWG sizes not on table in previous edition
Table 46	Amended table to include sizes 26-23AWG	Clarification (Not change in method)	Table 46	No values for these sizes in previous edition
Table 48	Minimum Insulation Resistance for type XTW changed from 58 GΩ•m (MΩ•1000 ft) at 15 °C to 74 GΩ•m (MΩ•1000 ft) at 15 °C	Minor change (not required to resubmit)	Table 48	Increase requirements from previous edition slightly

CSA Std C22.2 No. 49-10			CSA Std C22.2 No. 49-06	
Clause	Title and comment		Clause	Title and comment
Table 59	New: Test current and Fuse Protection for “-R” cords	New Requirements applicable to 18-14AWG, 300V only  <b>(Customers wishing to maintain approval are required to re-submit for approval)</b>	-	-
Figure 7,8&9	Deleted	No change reference given to C22.2 No 2556	-	-
Figure 10	New Mandrel crushing test	- R rated cords addition section 5.1.18	-	-
Figure 11	New Mandrel pinching test	- R rated cords addition section 5.1.18	-	-
Figure 12	New Apparatus for supply cord flexing & L-Bracket slot details	- R rated cords addition section 5.1.18	-	-
Figure 13	New Tinsel Flex test apparatus (see clauses 5.1.19 and 5.1.21)	New see 5.1.19 above	-	-
Appendix	Removed Appendix “B” & “C” and renamed Appendix “D” & “E”	Change	-	-