CERTIFICATION Notice

An Urgent Bulletin from CSA Group

Wire and cable No. 240
(Supersedes Notice, Wire and Cable No. 191, Ref. No: N14-088 and Informs Nos. 199 and 203, Ref Nos: I14-153 and I15-062)

Effective Date: September 30, 2019

Date: April 9, 2018

Apply Before November 30, 2018

Announcing: Publication of CSA C22.2 No. 38-18/UL 44, 19th Edition/NMX-J-451-ANCE-2018, 6th Edition – Thermoset-Insulated Wires and Cables

Class No: 5832 03, WIRES – Thermosetting
5832 83, WIRES – Thermosetting – Certified to US Standards

To purchase the Standard, visit us at www.shop.csa.ca

Who is affected?

Manufacturers of thermoset-insulated wires and cables.

What do you do?

1. CSA Group 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 Group's "Application for CSA Certification Services" and "Quotation" communication. You must respond no later than November 30, 2018 in order to guarantee the update to your certification is completed by September 30, 2019.

Approvals:

Customers who currently hold certification for the optional sunlight resistance or "SR" marking are required to submit a sample to verify compliance to the revised criteria for weather resistance.

Effective immediately, all new applications and/or updates to currently certified products will be evaluated to CSA C22.2 No. 38-18.

Major Revisions:

See Highlights in Attachment 1.

Background and Rationale:

This Notice supersedes CSA TIL J-44 covering composite insulations for single conductor Types R90, RW75, RW90, RWU75 and RWU90, which was published in November 2014 and will now be withdrawn. CSA C22.2 No. 38-18 was prepared by the CANENA THSC20 on Building Wires and Cables and was reviewed by the CSA Integrated Committee on Fixed Installation Wires and Cables under the jurisdiction of the CSA Technical Committee on Wiring Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety. This standard was also published in the United States and Mexico as UL 44, 19th Edition and NMX-J-451-ANCE, 6th Edition, respectively.

For questions specific to your file or products contact your CSA Group technical staff associate.
Go to http://www.csagroup.org/services/testing-and-certification/product-listing/ 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 Evangeline Cometa
by phone 416-747-2671, fax 416-747-4149
or e-mail evangeline.cometa@csagroup.org

The standard edition or amendments announced in this Notice may be used for certification as of the date of issue of this Notice. The "Effective date" in this Notice is the date on which the current requirements, applicable to Certified products listed in the affected class numbers, expire and the standard edition or amendments announced in this Notice become the only requirements that may be used for certification.

In the event that currently certified products do not comply with the latest requirements outlined in this Notice after the "effective date", the certification of such models may be discontinued.

CSA Group

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ATTACHMENT 1

HIGHLIGHTS OF REVISIONS:

a. This edition incorporates the provisions of CSA Technical Information Letter (TIL) No. J-44 covering composite insulations for single conductor types R90, RW75, RW90, RWU75 and RWU90.
b. The duration for weather (sunlight) resistance test for Canada has been increased from 720 hours to 1000 hours xenon-arc exposure followed by cold bend test at -25°C. XL material containing a minimum of 2.0% carbon black measured to a depth of at least 0. 76 mm (0.030 in) or to a depth of 50% of the minimum average thickness, whichever is greater, need not be subjected to the xenon-arc exposure.
c. 1000V rating has been added for all US types XHHW-2, XHHW, XHH, RHH, RHW-2, RHW, SA, SIS.
d. New table has been added (Table 19) for thickness of composite insulations on 1000V types RWU75 and RWU90.

Clause No.	Major Revisions	Remarks
2 Reference Publications	Added ASTM B801, B901 and B902. These standards are referenced in Table 3.	
3 Definitions	Expanded the definitions in the glossary for “filled” and “unfilled” to specify what materials make up the filler. Such materials include carbon black, inorganic minerals, and solid flame retardants.	
4.1 Conductors		
4.1.5.1.2	Replaced 22 AWG with 24 AWG as the smallest size of aluminum strands that can be used.	
4.1.5.7 (a)	Revised to permit compressed unilay single input conductors to have other than reversed direction of successive layers.	
4.1.6.1	Revised to clarify that there are no diameter requirements for conductor classes not referenced in Tables 5 to 10.	
4.1.7.4	Revised to allow butt-spliced 8.37 mm^2 (8 AWG) stranded conductor.	
5.3.1.2 Tests of aluminum conductors	Revised such that in case of non-compliance, the results from specimens taken from a center strand shall be considered for referee purposes.	
5.4 Long-term insulation resistance in water	Revised for clearer interpretation and harmonization of the long-term insulation resistance test procedure and the method of calculating the acceptance criteria using the slope of a least square best fit straight line curve.	
5.5 Long-term insulation resistance in air for 90C rated conductors		
5.7 Conductor corrosion	Revised to specify the temperature and duration of the test.	
5.13 Hot-creep elongation and hot-creep set	Added a country difference to the test requirement for hot-creep elongation and hot creep set for XL insulation.	
5.14.2 Burning particles (dropping)	Clarified title to specify that requirement applies to XL insulation types only.	
5.14.4 (a)	Revised to clarify that the requirements apply only to the vertical flame aspect of the test and not the horizontal flame portion.	
5.15.1 Weather (sunlight) resistance	Revise that in Canada, in order to be marked with the optional “SR” rating, materials shall retain 80% of their initial tensile strength and elongation after being subjected to 1000 h (increased from 720h) xenon arc exposure as well as comply with the requirements for Cold Bend test at minus 25C.	File review
5.15.2 Weather (sunlight) resistance	Revised to state that in Canada, XL material containing a minimum of 2.0 % carbon black measured to a depth of at least 0.76 mm (0.030 in) or to a depth of 50% of the minimum average thickness whichever is greater need not be tested to clause 5.15.1. The carbon black particle size shall be of size 35 nm or less.	File Review
5.16.2 Oil resistance at 75C	Revised to indicate that a wire that complies with the requirements for PR II shall also comply with those for PRI.	

Clause No.	Major Revisions	Remarks
5.22 Evaluation of new materials	Revised to specify that the elongation requirement applies to both the insulation and jacket.	
6.1.4 Conductor size	Added a reference to Table 5, Conductor diameter and cross-sectional area in 6.1.4 to ensure the correct mm2 value is marked.	
6.1.5 Conductor stranding	Added new clause to specify that wire is required to be marked when other than those with ASTM Class B, C or SIW stranding.	
6.1.10.1 (d)	Revised to include the option to use FT4/IEEE 1202 marking and to clarify in the note that the Canadian Electrical Code, Part I specifies this for certain conditions and types of cables.	
7.1 Deep-well submersible pump	Added a note to indicate that in Canada, the minus 40C rating is required as per the Canadian Electrical Code, Part I.	
Table 1	Added 1000V rating to the US type designations. This option is only available for use in the US.	
Table 2	Type of stranding for aluminum to match what is available for copper.	
Table 8	Revised to address adding diameters for sizes 12-2 AWG and to the title to include single input wire.	
Table 15	Added 1000V rated Type RHW, RHW-2 and RHH. Removed the superscript "*a*" from Types R90, RW75 and RW90 and the footnote "*a for silicone only*"	Per TIL CSA J-44
Table 16	Expanded to include thickness requirements for the inner and outer layers of composite insulation and to permit insulation materials in the inner layer of composite insulations in RW75, RW90 and R90 to be other than silicone. ***Note: The column "Non-composite construction" should read "Non-composite construction (EP, EPCV and XL only)"***	Per TIL CSA J-44
Table 17	Removed the superscript "*a*" from Types R90, RW75 and RW90 and the footnote "*a for silicone only*"	Per TIL CSA J-44
Table 19	Added new table for thickness of composite insulations on 1000V Types RWU75 and RWU90.	Per TIL CSA J-44
Table 20	Added 1000V rated RHH,RHW and RHW-2	
Table 34 (was Table 33)	Added "XL composite insulation" to the title.	
Table 36 (was Table 35)	Added superscripts b, c, and d with corresponding footnotes: b Type RW75 and RW90 XL and XL composites – see Table 34 c Type RW75 and RW90 rated 1000 V – See Table 16 d Applies to the United States only.	
Table 37 (was Table 36)	Added 1000V rated RHH and footnote b Applies to the United States only.	
Table 46 (was Table 45)	Added 1000V US types	
Annex A	Added 1000 V rating to XHHW, RHH, and RHW types.	
Annex B	Added 1000V rating to applicable US types.	
Annex F	Added new annex for requirements for rope-lay stranded flexible conductors.	
Annex F becomes Annex G	Protective coverings other than jackets	
Annex K	Revised to include extruded semi-conducting material in K.2.2; and to reference back to test requirements.	