

Standard Information

Standard Number: CSA C22.2.130

Standard Name: Requirements for electrical resistance trace heating and heating device sets

Standard Edition and Issue Date: 4th Edition Dated February 1, 2016

Date of Previous Revision to Standard: 3rd Edition Reaffirmed 2013

Effective Date of New/Revised Requirements

Effective Date: December 30, 2017

Impact, Overview, Fees and Action Required

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes:

CSA C22.2.130 – 2016 edition modifies many tests as detailed in the table below. The changes were added to align with the international standard IEC 60069-30-1; Explosive atmospheres – Part 30-1: Electrical resistance trace heating – general and testing requirements.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Fees: So that production of products bearing the Listing Mark will not be interrupted, between now and the Effective Date, a quote will be issued for the Applicant to work with their local Intertek Lab to determine the necessary test program, sampling requirement and needed construction details and/or updated marking/instruction details.

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

Description of New/Revised Technical Requirements

Clause	Verdict	Comment
1.1	Info	Scope increased to include ceiling and wall heating
4.3.3		<p><i>Heating cables for general use now require a sheath minimum coverage of 70%, or shall pass the pin penetration test. A minimum coverage of 50% was previously allowed, provided an outer jacket is employed. Additions to existing requirements are <u>underlined</u> and deletions are shown lined out below.</i></p> <p>Coverage either shall extend over the whole of the surface of the insulation and shall be evenly distributed, with a minimum coverage of 80%, except that heating cables for general use (see Table 1) may have a minimum coverage of 50%, provided that they have an outer jacket. <u>70%, or shall pass the pin penetration test specified in Clause 6.2.18.</u> The amount of coverage shall be determined in accordance with Clause 4.5.2 of CSA C22.2 No. 0-3 <u>CSA C22.2 No. 2556, Clause 5.2.</u></p>
4.7	Info	All temperature controls shall meet the requirements of applicable standards such as C22.2 no 24 (in past only integral controls)
5.2 (i) & 5.3 (h),(i)		<i>Markings for Factory or field Assembled heating devices require "R" value of insulation for all space heating application (ie floor, wall, and ceiling).</i>
6.2	Info	Heating devices
6.2.2		Insulation Resistance testing (dry) has been added after all Dielectric tests in the standard.
6.2.4		Verification of startup current has been slightly modified to include wording from international standards. Clarification on the use of correlating data and removal of upper third of the manufactures declared output tolerance.
6.2.6		<p>Verification of Sheath Temperatures:</p> <ul style="list-style-type: none"> - Added new Normative Table E1 for maximum temperatures allowed (Previous Table Informative) - Added new Pipe sculpture (Longer with U bend and thermocouple locations) - Added manufactures calculated sheath temperature values (Change from predicted values) which required manufactures to produce heat transfer calculations for certification purposes. - Added Plate testing method as optional test after demonstrated the ability to predict a runaway pipe (work piece) temperature (Tpr) - Added Indoor trace heaters or surface heaters used for space heating - Added R20 insulation minimum for floor heating applications - Added: Indoor embedded installation on sub-floors; Indoor wall installation; Ceiling installation; - Modified testing for Ceiling Heating Minimum R 50 Insulation value required for testing



Standards Update Notice (SUN)

Issued: September 1, 2016

Clause	Verdict	Comment
6.2.7	Info	Modified Overload capacity of grounding braid or sheath (Sample is now required to cool to room temperature between test currents)
6.2.8		Modified Crush Test by adding Insulation Resistance test after Dielectric
6.2.10		Modified Cold bend, Room and cold impact tests by adding Insulation resistance testing after Dielectric
6.2.12		Modified Elevated Temperature exposure testing increasing oven Temperature exposure from 14 days to 28 days at 20+/-5°C (previous 25+/-5°C) above maximum continuous exposure temperature. Also added Insulation resistance test after dielectric
6.2.19		Added Pin Penetration Test for braids less than 70%. New Test Mechanically protected heaters — Penetration test for new heating products
8.1		Installation instructions have been amended to include: - the wording "Caution: a ground fault protection devices must be used with this heating device" - See Table 67 of the Ce code, Part I) includes clearances from combustible surfaces
<i>Annex B</i>	Info	<i>Additional requirements and exemptions for specific applications</i>
B.3		Heating devices and integral components intended to be installed in a (cementitious) cement-based layer of mortar* on a wood or concrete floor, or on a wall or ceiling surface, testing now includes a cold impact at 4J
		CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.