



Certificate of Compliance

Certificate: 1545742

Master Contract: 157944

Project: 80104248

Date Issued: 2021-10-26

Issued To: nVent Thermal Canada Ltd
250 West St
Trenton, Ontario, K8V 5S2
Canada

Attention: James Lim

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: Johann Borabon
Johann Borabon



PRODUCTS

CLASS 2872 01 - HEATERS - Cable and Cable Sets

CLASS 2872 81 - HEATERS - Cable and Cable Sets - CERTIFIED TO U.S. STANDARDS

Bulk Series Type Mineral Insulated (MI) Copper and Stainless Steel Sheathed Heating Cable, rated up to 300V and 600V maximum.

Series Type Mineral Insulated (MI) Copper, Stainless Steel and Stainless Steel Corrugate Sheathed (XMI-L) Heating Cable Sets, usages (Canada) G, W, S, P, X and installation types (U.S.) A, B, C, D; consisting of the heating cables, joints, cold leads, power termination, end seal and options, rated up to 300V and 600V maximum.

Series MI stainless steel sheathed heating Cable Set, DHH 'D' Design Heating Unit (Down Hole Heater, 600V maximum).



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Series MI Copper and Stainless Steel Sheathed Heating Cable Set Repair Kit, Cat. Nos. REPKITCUHTG and REPKITSSHTG (600V ac maximum).

Series MI Stainless Steel Corrugate Sheathed Heating Cable Set Repair Kit, Cat. Nos. REPKITCSHC, REPKITCLHC, REPKITCSHH, REPKITCLHH, REPKITCSEND, REPKITCLEND (all kits for use with the above Series MI Steel Corrugate Heating Cable Sets constructions rated up to 300V and 600V maximum).

'Raychem In-Pipe Miser', 2-conductor construction MI cable with stainless steel sheath, or copper sheath with a HDPE or LSZH overall jacket, Usages G, W, S, P, X (in Canada) and Installation Type D (U.S.), Pipe interior heating systems (heating sets installed in metal pipe, tanks, etc., and heating sets installed in non-metallic pipe, tanks, etc.; wet locations), rated at 120V ac, 3.6 Watts/ft to 5.1 Watts/ft, 56 Watts min to 1275 Watts max.

'Raychem In-Pipe Mini', 2-conductor construction MI cable, Usages G, W, S, P, X (in Canada) and Installation Type D (U.S.), Pipe interior heating systems (heating sets installed in metal pipe, tanks, etc., and heating sets installed in non-metallic pipe, tanks, etc.; wet locations), rated at 120V ac, 3.0Watts/ft to 4.0 Watts/ft, 56 Watts min to 152 Watts max.

'Raychem In-Pipe Retro', 1-conductor construction MI cable with stainless steel sheath, or copper sheath with HDPE or LSZH overall jacket, Usages G, W, S, P, X (in Canada) and Installation Type D (U.S.), Pipe interior heating systems (heating sets installed in metal pipe, tanks, etc., and heating sets installed in non-metallic pipe, tanks, etc.; wet locations), rated at 120V ac (5.2Watts/ft to 8.0 Watts/ft, 251 Watts min to 1208 Watts max), and 240V ac (5.2W/ft to 8.5W/ft, 497 Watts min to 3445 Watts max).

Notes:

1. Bulk MI heating cable listed above are only for sale to OEMS where the combination of terminations to make a heating cable set are to be investigated and CSA Certified by the OEM making the completed heating cable set. Bulk series MI heating cable are not eligible to bear the CSA Mark (see "Markings" section within the Certification report for the permitted marking).
2. Suffixes may be added to the cable reference denoting the type of design, cable reference, heated length and cold lead length, operating voltage, wattage, etc.
3. For specific ratings please see the description section of this report.
4. The maximum continuous exposure temperature of MI cable (pipe and vessel tracing (metal or non-metal)), with covering and Cu Sheath, is 90°C and 350°C for Cu sheathed.
5. Maximum continuous exposure temperature (heating device de-energized) for stainless steel cable set is 550°C for pipe and vessel tracing (metal).
6. Maximum continuous exposure temperature (heating device de-energized) for stainless steel cable only is 650°C for pipe and vessel tracing (metal).
7. Maximum continuous exposure temperature is 550°C for XMI-L.
8. Installation in accordance with the Canadian Electrical Code Part I (CEC Part I, Canada) or the National Electrical Code (NEC, U.S.) as applicable.
9. Repair Kits shall comply with the requirements of the CEC Part I or the NEC, as applicable, for use only in industrial locations.
10. *Series Type Mineral Insulated (MI) Heating Cable sets including Wieland COAX Connectors Cat. Nos. 74.900.1228.6, 74.900.3428.6, 74.910.1228.6 or 74.910.3428.6 are eligible to bear the cCSAus mark and are*



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restricted to a maximum circuit/set size of 35Amps, and a limitation on the conductor sizes to be used with the Wieland COAX connectors to 14AWG to 8AWG.

11. *Series Type Mineral Insulated (MI) Bulk Heating Cable can only be sold to OEM's who have Series MI Heating Cables Sets evaluated and listed with CSA and has specific traceability tagged on the MI series heating cable shipped and labeled on the packaging – this traceability includes the specific nVent (formerly Pentair) report where the bulk heating cable is listed and the specific CSA report number of the one using their heating cable.*
12. *The PyroFLX Option (which may include alternate connection, PYROFLXREPKIT) for attaching lengths of MI heating cable sets into a designed MI Heating Cable Set with a maximum MI Heating Cable Set rating of 32Amps and are eligible to bear the CSA Mark only.*
13. *Series Type Mineral Insulated (MI) Heating Cable Sets which include Woodhead Connector Cat Nos. LCA-3000-30, -301, -40, -401, and LCA-3006-30, -301, -40-, -401 are eligible to bear the CSA Mark only.*
14. *XMI-A, XMI-L (formerly LSTMI) are brand designations for stainless steel (Alloy 825) sheathed and steel corrugate (316L) sheathed heating cables (and sets) respectively.*

CLASS 2878 01 - HEATERS - Cable and Cable Sets - For Hazardous Locations

CLASS 2878 81 - HEATERS - Cable and Cable Sets - For Hazardous Locations - CERTIFIED TO US STANDARDS

Class I, Division 1 and 2, Groups A, B, C and D; Class II, Division 1 and 2, Groups E, F and G; Class III, T-coded *

Series MI stainless steel sheathed heating Cable Set, DHH 'D' Design Heating Unit (Down Hole Heater, 600V maximum).

Series MI Copper and Stainless Steel Sheathed Heating Cable Set Repair Kit, Cat. Nos. REPKITCUHTG and REPKITSSHTG (600V ac maximum).

Series MI Stainless Steel Corrugate Sheathed Heating Cable Set Repair Kit, Cat. Nos. REPKITCSHC, REPKITCLHC, REPKITCSHH, REPKITCLHH, REPKITCSEND, REPKITCLEND (all kits for use with the above Series MI Heating Cable Sets constructions rated up to 300V and 600V maximum).

Class I, Division 1 and 2, Groups A, B, C and D; Class II, Division 1 and 2, Groups E, F and G; Class III, Division 1 and 2; T-coded*

US: Class I Zone 1 AEx eb IIC Gb T* or Class I Zone 2 AEx nA IIC Gc T*

CANADA: Ex 60079-30-1 IIC T* Gb or Ex 60079-30-1 IIC T* Gc

Series Type Mineral Insulated (MI) Copper, Stainless Steel and Stainless Steel Corrugate (XMI-L, see note 13) Heating Cable Sets, usages (Canada) G, W, S, P, X; consisting of the heating cables, joints, cold leads, power termination, end seal and options; rated up to 300V and 600V max.



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APPLICABLE REQUIREMENTS

- | | |
|------------------------------|---|
| CSA-C22.2 No. 130-16 | - Requirements for Electrical Resistance Trace Heating and Heating Device Sets – Fourth Edition |
| UL515 (Second Edition) | - Electric Resistance Heat Tracing for Commercial Applications |
| IEEE 515- 2017 | - Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Heat Tracing for Industrial Applications (Mini, Miser, and Retro Series MI Heating Cable Sets are not listed to this Standard) |
| IEEE 515.1- 2012 | - Recommended Practice for the Testing, Design, Installation, and Maintenance of Electrical Resistance Heat Tracing for Commercial Applications |
| As applicable: | |
| CAN/CSA 60079-0:11 | - Explosive atmospheres - Part 0: Equipment - General requirements |
| CAN/CSA 60079-7:12 | - Explosive atmospheres - Part 7: Equipment protection by increased safety "e" |
| ANSI/UL 60079-0 (Ed.6) | - Explosive atmospheres - Part 0: Equipment - General requirements |
| ANSI/UL 60079-7 (Ed.4) | - Explosive atmospheres - Part 7: Equipment protection by increased safety "e" |
| CAN/CSA- C22.2 60079-30-1:17 | - Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements |
| UL 60079-30-1 (Ed.1) | - Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements |