



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx ITS 07.0018X issue No.:2

Status: **Current**

Date of Issue: 2014-03-03 Page 1 of 4

Certificate history:

Issue No. 2 (2014-3-3)

Issue No. 1 (2010-11-22)

Issue No. 0 (2008-11-12)

Applicant: **Chromalox Ltd.**
Unit 1.22
Lombard House
2 Purley Way
Croydon
CR0 3JP
United Kingdom

Electrical Apparatus: **SRM/E and SRL Self Regulating Heat Tracing Cable**
Optional/ accessory: U Series Heat Trace Connection System Accessories UPC, UMC, UES and RTES

Type of Protection: **Increased Safety Ex e**

Marking: IECEx ITS 07.0018X
Ex e II Gb T3 (SRM/E)
 $-60^{\circ}\text{C} \leq T_{\text{amb}} \leq 195^{\circ}\text{C}$
Ex e II Gb T5 (SRL)
 $-60^{\circ}\text{C} \leq T_{\text{amb}} \leq 95^{\circ}\text{C}$

Approved for issue on behalf of the IECEx
Certification Body:

A T Austin

Position:

Certification Officer

Signature:
(for printed version)

Date:

2014-03-03

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SB
United Kingdom



IECEx Certificate of Conformity

Certificate No.: IECEx ITS 07.0018X

Date of Issue: 2014-03-03

Issue No.: 2

Page 2 of 4

Manufacturer: **Chromalox Ltd.**
1347 Heil Quaker Blvd,
LaVergne,
TN 37086-3536
United States of America

Additional Manufacturing location
(s):

Chromalox	Ogden Chromalox
Unit 1.22	2150 Rulon White Blvd
Lombard House	Utah 84404
2 Purley Way	USA
Croydon	United States of America
CR0 3JP	
United Kingdom	

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-30-1 : 2007-01 Edition: 1	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
GB/ITS/ExTR07.0023/01

Quality Assessment Report:

GB/ITS/QAR09.0002/02

GB/ITS/QAR09.0013/01

GB/ITS/QAR12.0004/00



IECEx Certificate of Conformity

Certificate No.: IECEx ITS 07.0018X

Date of Issue: 2014-03-03

Issue No.: 2

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Chromalox SRM/E and SRL heat trace cables are self regulating types suitable for use in Zone 1 hazardous areas. The cables are used to prevent freezing of process fluids in pipes, floodgates and other similar uses. The cable is constructed with two parallel conductors in tinned copper, cased in a polymer charged with carbon and covered with an insulating jacket with braided earth screen and optional outer jacket.

Supply Voltage 120V or 208-277V (according to part number).

Output: 3, 5, 8, 10 W/ft (type SRL) and 3, 5, 8, 10, 15 and 20 W/ft (type SRM/E)

Cable terminations are facilitated by means of the Chromalox UPC Power Connection Kit, UMC Multiple Entry Connection Kit, UES End Seal Kit and RTES End Seal Kit. Ingress protection is provided by O-Rings for the UPC and UMC Connection Kit enclosure covers / standoffs, UES End Seal Kit and RTES End Seal Kit, and silicone rubber grommets for the heating cable inlets within the pipe standoffs. When assembled in accordance with the manufacturer's instructions, the UPC and UMC Connection Kits are rated IP66.

Electrical connections within the enclosures are made by means of rail mounted feed-through terminal blocks, maximum rating 47 Amps. Each enclosure is provided with an 3/4 inch NPT threaded conduit entry. The user shall supply a suitably IECEx Component Certified Conduit Hub or Grounding Conduit Hub as directed by the manufacturer's instructions.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. When installed in a TT or TN type system, a residual current device (RCD) with a rated residual operating current not exceeding 300 mA shall be used. Preference should be given to RCDs with a rated residual operating current of 30 mA. The device shall have a maximum break time not exceeding 5 s at the rated residual operating current and not exceeding 0,15 s at five times the rated residual operating current.
2. When installed in an IT system, an insulation monitoring device shall be used to disconnect the supply whenever the insulation resistance is not greater than 50 Ω per volt of rated voltage.
3. Electrical entry to be provided by suitably Component Certified IECEx Conduit Hub or Component Certified IECEx Grounding Conduit Hub.

Routine Tests:

4. Dielectric Test: Each supplied length shall be subjected to dielectric tests at a voltage of $2E + 1000$ where E is the rated voltage of the cable. The test voltage waveform shall be essentially sinusoidal, with a frequency of 45Hz to 65Hz and shall be maintained for 1 min without breakdown.
5. Verification of Rated Output: The measured d.c resistance per unit length at a specified temperature shall be within the manufacturer's declared tolerance.



IECEx Certificate of Conformity

Certificate No.: IECEx ITS 07.0018X

Date of Issue: 2014-03-03

Issue No.: 2

Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1:

To permit the minimum ambient temperature of -60deg°C

Addition of routine test requirements

Addition of manufacturing site

Issue 2: (GB/ITS/ExTR07.0023/01, G101158915)

1. To update the certificate to the latest standards listed in this certificate.

2. To Amend the Company name from Eltron Chromalox Ltd to Chromalox Ltd.