IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.:	**IECEx BAS 13.0090X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 10	Issue 9 (2025-12-03) Issue 8 (2025-11-19) Issue 7 (2024-06-04) Issue 6 (2022-09-14) Issue 5 (2021-03-15) Issue 4 (2020-08-28) Issue 3 (2020-06-22) Issue 2 (2019-06-11) Issue 1 (2018-09-18) Issue 0 (2015-07-13)
Date of Issue:	2026-01-21		
Applicant:	**Chemelex Belgium NV** Research Park Haasrode - Zone 2 Romeinse straat 14 Leuven B-3001 **Belgium**		
Equipment:	**Mineral Insulated Electric Surface Heating Units**		
Optional accessory:			
Type of Protection:	**Increased Safety, Electrical Resistance – Trace Heating, Dust Protected, Flameproof**		
Marking:	**Ex 60079-30-1 db eb IIC T* Gb** **Ex 60079-30-1 tb IIIC T*°C Db** **Tmin -60°C** **(*see schedule)**		

Approved for issue on behalf of the IECEx Certification Body: **D Brearley**

Position: **Lead Certification Engineer**

Signature: (for printed version)

Date: (for printed version) 21/1/2026

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Certificate issued by:

SGS UK Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

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Date of issue: 2026-01-21 Issue No: 10

Manufacturer:
Chemelex Belgium NV
Research Park
Haasrode - Zone 2
Romeinse straat 14
Leuven B-3001
Belgium

Manufacturing locations:

Chromalox Isopad GmbH
Englerstrasse 11
Heidelberg D-69 126
Germany

Chemelex Canada Ltd.
250 West Street
Trenton
Ontario K8V 5S2
Canada

Chemelex Thermal (Suzhou) Co., Ltd.
Workshop B4,No. 528 Fangqiao Road,
CaoHu subdistrict, Suzhou
Jiangsu Province 215000
China

See following pages for more locations

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 equipment 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 60079-0:2017 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31:2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC/IEEE 60079-30-1:2015 Edition:1.0	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements

This Certificate **does not** indicate compliance with 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 Reports:

GB/BAS/ExTR13.0197/00
GB/BAS/ExTR17.0235/00
GB/BAS/ExTR19.0144/00
GB/BAS/ExTR20.0074/00
GB/BAS/ExTR20.0074/01
GB/BAS/ExTR20.0204/00
GB/SGS/ExTR24.0068/00

Quality Assessment Reports:

CN/CQM/QAR24.0003/01
GB/BAS/QAR06.0036/11
GB/BAS/QAR07.0053/11
GB/BAS/QAR09.0003/10
US/UL/QAR20.0011/04

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The **Mineral Insulated Electric Surface Heating Units** comprise metal sheathed mineral insulated heating cable(s) to IECEx BAS 13.0091U. A cold lead of mineral insulated cable is attached to both ends by joints within the provisions of this certificate.

Alternatively one end may be provided with an end cap within the provisions of this certificate.

Two sealing mechanism are detailed in the certificate, an integral part Mineral Insulated Cable Seal Assembly and a Compression Ring Type Cable Gland to IECEx BAS 08.0107X. These are included to provide provision for connecting and sealing to an Ex certified enclosure.

The hot/cold joints may be brazed and crimped or welded and crimped, and the outer sheath of the cold lead may be copper, cupro-nickel or stainless steel. The copper sheath cold lead has an option of LSZH jacket.

For additional information please see Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:
1. The MI Cable Seal assembly is to be installed within a suitable enclosure to protect from light and impact.
2. The MI Cable Seal Assembly has a service temperature range of -30°C to +120°C or -30°C to +105°C or -60°C to +70°C. See the manufacturer's instructions for further information.
3. The maximum withstand temperatures are shown in the table in the equipment description.
4. The maximum supply voltages are shown in the equipment description.
5. The minimum installation temperature is -60°C.
6. The minimum cable spacing must not be less than 25mm.
7. The minimum bend radius is 6 x the cable diameter.
8. Extreme care shall be used when handling and manipulating the Mineral Insulated Electric Heating Cables. Repeated bending actions of the cable may weaken the mechanical strength of the cable which could lead to failure. For further information, consult the manufacturer.
9. Consideration shall be given during the selection of the heating cable sheath material for the environmental exposure. Certain environmental impurities may lead to failures such as stress corrosion cracking (SCC). Consult the manufacturer for further information.
10. When PVC sleeving is used the operating temperature must not exceed +85°C.
11. When used in dust atmospheres the Compression Ring Type Cable Gland shall be sealed in accordance with the manufacturer's instructions and applicable code of practice, and the enclosure to which the gland is attached shall be provided with a minimum ingress protection of IP6X.
12. The heating element supply circuit must include an electrical protection device in accordance with IEC 60079-30-1.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 10.1

To update alternative manufacturer's name

Variation 10.2

QAR update

File Reference: **26/0054**

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Additional manufacturing locations:

Chemelex Poland Sp. z.o.o.
ul. Strefowa 21
58-200 Dzierzoniow
Poland

Annex:

IECEx BAS 13.0090X Annex Iss 3.pdf

SGS Baseefa Limited
Rockhead Business Park
Staden lane, Buxton, Derbyshire
SK17 9RZ
United Kingdom

The maximum withstand temperature and the maximum supply voltage for the 5 different cable sheath types are shown in the table below. The maximum supply voltage is between the heating element conductor and heating cable sheath. Both are dependent on the jointing method used.

Heater Reference	Conductor Configuration	Cable Sheath Material	Maximum Withstand Temp. (°C)	Maximum Withstand Temp. with brazed joints (°C)	Maximum Supply Voltage with brazed joints (U_o/U Vac)	Maximum Withstand Temp. with laser welded joints (°C)	Maximum Supply Voltage with laser welded joints (U_o/U Vac)
HCH1M / HCC1M	Single	Copper	+200	+200	300/500	N/A	N/A
32C	Dual	Copper	+200	+200	300/300	N/A	N/A
61C	Single	Copper	+200	+200	600/600	N/A	N/A
62C	Dual	Copper	+200	+200	600/600	N/A	N/A
HDF1M/ HDC1M	Single	Cupro-Nickel	+400	+400	300/500	N/A	N/A
HSQ1M	Single	Stainless Steel	+680	+550	300/500	+680	460/600
HIQ1M	Single	Inconel ‘Alloy 600’	+680	+550	300/500	+680	460/600
HAx1N or 61S	Single	Stainless Steel ‘Alloy 825’	+680	+550	600/600	+680	600/600
HAx2N or 62S	Dual	Stainless Steel ‘Alloy 825’	+680	+550	600/600	+680	600/600
HAx2M or 32S	Dual	Stainless Steel ‘Alloy 825’	+680	+550	300/300	+680	300/300
HCHR1M/ HCCR1M	Single	Copper (LSZH jacket)	+200	+200	300/500	N/A	N/A
61R	Single	Copper (LSZH jacket)	+200	+200	600/600	N/A	N/A

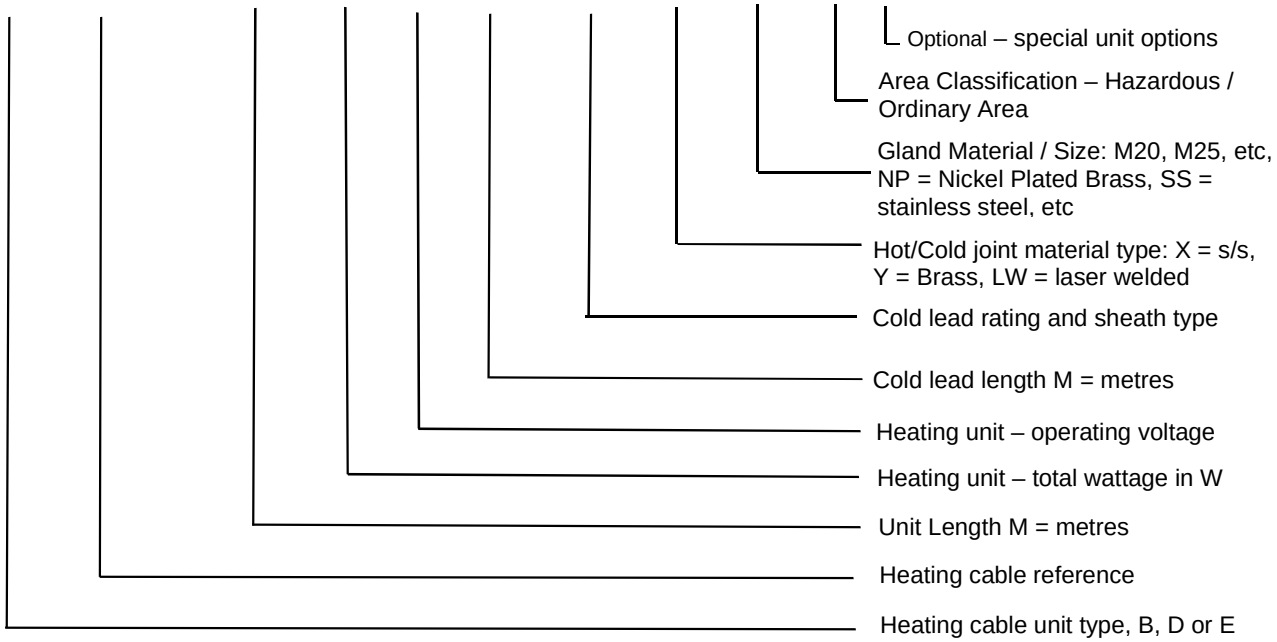
62R	Dual	Copper (LSZH jacket)	+200	+200	600/600	N/A	N/A
32R	Dual	Copper (LSZH jacket)	+200	+200	300/300	N/A	N/A

The T class of the Mineral Insulated Electric Surface Heating Units defined as part of a stabilised design or controlled design system that is dependent upon application and is determined using nVent proprietary software Trace Calc Pro. The algorithm defined in this software may be used in additional software.

A temperature limiting sensor or artificially created hot spot may still be used to limit the maximum surface temperature.

The configuration of the heating units is defined by the following naming convention:

B / HSQ1M1000 / 43.0M / 1217 / 230 / 1.2M / SC1H2.5 / X / NPM20 / EX / S*



* - Special unit options relate to non-Ex special variants.

The integral part Pyrotenax mineral insulated cable seal assembly comprises a brass housing or pot attached to the cable by threading, clamping by means of grub screws, crimping or brazing. The pot is compound filled with or without a disk to retain the compound during curing of the compound. Up to ten sleeved flexible cables are attached to the MIC conductors by crimping or brazing or the sleeved MIC conductors pass through the compound. The seals can be provided with or without an earth conductor.
The seals are for use with copper, cupro-nickel, or grade 825 stainless steel sheathed cables and are rated up to 300V, 500V or 750V.

The seal assemblies have a service temperature that is detailed in the identification string by defined values. The service temperature is also defined by the 3-digit Pot Configuration Code.

1st Digit of Code	Type of Pot
T	Threaded / screw-on
G	Grub screw secured
C	Crimped or brazed

2nd and 3rd Digit of Code	Min Service Temperature (°C)	Max Service Temperature (°C)
1A	-30	+105
1D	-30	+105
2A	-30	+120
2D	-30	+120
3A*	-60	+70
3R	-60	+70
3D	-30	+120
4A	-30	+105
4D	-30	+105
4X	-30	+105
4H	-30	+105
5A	-30	+120
5D	-30	+120
5X	-30	+105
5H	-30	+105

* Alternative temperature rating of -30°C to +120°C optional

The seals are identified by the following identification string:

PPAK /** / *** / *** / **** / -** / *** /EX/ ** / *** / ********

