EU Type Examination Certificate CML 19ATEX3378 Issue 2

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **FreezStop Regular/FailSafe Regular (FSR) Self-Regulating Heating Cable**

3 Manufacturer **Heat Trace Limited** **Heat Trace Hitech Co., Ltd**

4 Address

Mere's Edge, Chester Road, Helsby, Frodsham, Cheshire, WA6 0DJ, United Kingdom	**Cromwell Road, Bredbury, Stockport, SK6 2RF, United Kingdom**	**Unit 9 Southside, Bredbury Industrial Estate, Bredbury, Stockport, SK6 2SP, United Kingdom**	**527-54, Daegotbuk-ro, Daegot-myeon Gimpo-si, Gyeonggi-do, 10028, Republic of Korea**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-30-1:2017

10 The equipment shall be marked with the following:

II 2 GD	II 2 GD
Ex 60079-30-1 IIC T6 Gb[1]	Ex 60079-30-1 IIC T4 Gb[2]
Ex 60079-30-1 IIIC T85°C Db[1]	Ex 60079-30-1 IIIC T135°C Db[2]

IP67

Withstand temp range: -40°C to +85°C

[1] *Products rated up to 40 W/m and for nominally rated 230 V products up to 31 W/m powered up to a maximum 277 V*

[2] *Products rated above 40 W/m and for nominally rated 230 V products above 31 W/m powered up to a maximum of 277 V*

11 Description

The FreezStop Regular/FailSafe Regular (FSR) Self-Regulating Heating Cable comprises two parallel buswires housed within a semi-conductive self-limiting matrix. The semi-conductive self-limiting matrix is covered with a thermoplastic insulation jacket which is then protected by an aluminium sheath or a metallic braid. An optional outer jacket of TPE, PE, PVDF, MFA, or PFA can be specified. The cables are rated at up to 50 W/m and 277 V.

The cable is intended to be cut to length on site and the equipment is designed to be connected to a supply by means of suitable certified cable entries and junction boxes (i.e. Ex e or Ex d) in accordance with the manufacturer's installation instructions. Termination can be made using the Heat Trace termination kits approved under CML 19ATEX3390U and CML 19ATEX3391U or any suitably certified type termination kit which fully isolate, insulate and seal the conductive cores.

Description	Temperature
Max. continuous exposure temperature (Power ON)	85°C
Max. permissible exposure temperature (Power OFF)	85°C
Minimum installation temperature	-40°C

Variation 1

This variation introduced the following changes:

i. To update the standard reference from EN 60079-30-1:2007 to EN 60079-30-1:2017 and to update the equipment marking accordingly.

Variation 2

This variation introduced the following changes:

i. Introduction of alternative braid options with new product references
ii. Correction from previous assessment to include additional manufacturing locations
iii. Typographical correction to the product description

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	09 Dec 2019	R12696A/00	Issue of Prime Certificate
1	19 May 2020	R13195A/00	Introduction of Variation 1
2	29 Jun 2022	R15271A/00	Introduction of Variation 2

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. An electric strength test of 2 U + 1000 V rms shall be applied between the conductors and the outer braid or sheath as appropriate for 60 seconds in accordance with the requirements of EN 60079-30-1:2017 clause 5.1.2.
ii. An electric strength test of the polymeric sheath (over jacket) used for corrosion resistance shall be carried out in accordance with the requirements of EN 60079-30-1:2007 clause 5.2.1.
iii. The manufacturer shall verify the output rating for each cable manufactured in accordance with the requirements of EN 60079-30-1:2017 clause 5.2.2.
iv. The manufacturer shall demonstrate, through their quality program, the thermal safety of the trace heating cable with respect to time in accordance with the requirements of EN 60079-30-1:2017 clause 5.1.12.

14 Specific Conditions of Use (Special Conditions)

None.

Certificate Annex

Certificate Number	**CML 19ATEX3378**
Equipment	**FreezStop Regular/FailSafe Regular (FSR) Self-Regulating Heating Cable**
Manufacturer	**Heat Trace Limited**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
HC2750/C	1 of 1	9	09 Dec 2019	Certification Drawing for FreezStop Regular
FSR Markings	1 of 2	0	09 Dec 2019	FSR Heating Cable – ATEX and IECEx Markings
FSR Markings	2 of 2	0	09 Dec 2019	FSR Heating Cable – ATEX and IECEx Markings
FSR Drum Label	1 of 1	0	09 Dec 2019	Cable Drum Label – For Cable Type FSR
HTML-05/C	1 of 1	0	09 Dec 2019	Certification Drawing for FSR Marking Label
HTML-06/C	1 of 1	0	09 Dec 2019	FSR ATEX & IECEx Label

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
FSR Markings	1 of 2	1	19 May 2020	FSR Heating Cable – ATEX and IECEx Markings
FSR Markings	2 of 2	1	19 May 2020	FSR Heating Cable – ATEX and IECEx Markings
HTML-05/C	1 of 1	1	19 May 2020	Certification Drawing for FSR Marking Label
HTML-06/C	1 of 1	1	19 May 2020	FSR ATEX & IECEx Label

Issue 2

Drawing No	Sheets	Rev	Approved date	Title
H2750/C	1 of 1	11	28 Jun 2022	Certification for Freezstop Regular
FSR Markings	1 to 5	2	28 Jun 2022	FSR Heating Cable- ATEX and IECEx markings