1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 09ATEX1320X** Issue: **0**

4 Equipment: **SPA, SPB, SPMH and SPHH ranges of Stopping Plugs**

5 Applicant: **Peppers Cable Glands Ltd**

6 Address: Stanhope Road
Camberley
Surrey
GU15 3BT
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007 IEC 60079-31:2008

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

Ex I M2
Ex d I Mb
Ex e I Mb

or

Ex II 2GD
Ex d IIC Gb
Ex e IIC Gb
Ex tb IIIC Db IP6X •

• The Stopping Plugs, where applicable, meet the requirements of IP66 and IP68. Refer to Product Description for full IP designation

Project Number 17198
C. Index 07

D R Stubbings BA MIET
Certification Manager

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13 **DESCRIPTION OF EQUIPMENT**

The Stopping Plugs comprise a cylindrical body, partly threaded at one end with a male thread. They are intended to fill unused cable entries in associated apparatus. The Type SPMH and SPHH Stopping Plugs may also be fitted with an optional O-ring seal.

The products are manufactured with the following external profiles and assigned the following prefix type designations:

SPHH Series - Hexagonal head

SPMH Series - Round dome head, with an external hexagonal socket recess

SPA Series - Round head, with an external face hexagonal socket recess

SPB Series - Round head, with an internal face hexagonal socket recess

The products are manufactured with the following thread form options:

M16/ M20/ M25/ M32/ M40/ M50/ M63/ M75/ M80/ M85/ M90/ M100 - ISO Metric to IEC 60423:1993, sizes above M75 may be manufactured with a 1.5 mm pitch

½"/ ¾"/ 1"/ 1 ¼"/ 1 ½"/ 2"/ 2 ½"/ 3"/ 3 ½"/ 4" NPT and NPSM to ANSI/ASME B1.20.1:1983 (R2001)

½"/ ¾"/ 1"/ 1 ¼"/ 1 ½"/ 2"/ 2 ½"/ 3"/ 3 ½"/ 4" – BSPP to BS EN ISO 228-1

½"/ ¾"/ 1"/ 1 ¼"/ 1 ½"/ 2"/ 2 ½"/ 3"/ 3 ½"/ 4" – BSPT to BS21:1985

7/ 9/ 11/ 13.5/ 16/ 21/ 29/ 36/ 42/ 48 PG to DIN 40430

PG48F to NF C 68-312

Note: All threads are manufactured in accordance with EN 60079-1:2007 (Ed.6) clauses 5.3 and C.2.2 (as applicable).

The Stopping Plugs may be manufactured with other thread forms, provided that they are in accordance with the applicable requirements of EN 60079-1:2007 clause 5.3 and C.2.2.

Design Options:

O' ring seals

'O' ring seals materials fitted to male thread forms may be provided in the following materials to suit the application:

Nitrile	Silicone	Viton
Neoprene	Fluorosilicone	EPDM

Material of manufacture and marking:

The Stopping Plugs may be manufactured from the following materials:

Brass grade CW614 (CuZn 39Pb3)/ CZ121 3Pb	Stainless Steel 1.4404/ 316 S11
Brass grade CW617N (CuZn 40Pb2)/ CZ122	Stainless Steel 1.4401/ 316 S31
Brass grade CW614N (CuZn 38Pb4)/ CZ121 4Pb	Stainless Steel 1.4301/ 304
Brass grade Ecobrass C69300/ C87850	Stainless Steel 1.4305/ 303
Aluminium B21.1.90 AA6262T9/ 6262T9 •	Aluminium AW6082/ AW 6262/ 6082TF •

• Not suitable for Group I use

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Surface coating:

The products may additionally be metal plated with either: Nickel or Zinc (0.008 mm thick max.) to suit the application.

Product Type Ref:

The product type reference is derived from the following options:

A-B-C-D-E-F *(for SPMH and SPHH)*
A-B-D-E-F *(for SPA and SPB)*

A **Product Type**

SPMH	=	Mushroom head stopping plug
SPHH	=	Hexagon head stopping plug
SPA	=	Type A stopping plug
SPB	=	Type B stopping plug

B **Material of manufacture**

A	=	Aluminium
B	=	Brass
S	=	Stainless Steel

C **IP Seal code**

0	=	No seal fitted	(-100°C to +400°C)
1	=	Nitrile O-ring	(-30°C to +100°C)
2	=	Neoprene O-ring	(-35°C to +90°C)
3	=	Silicone O-ring	(-60°C to +200°C)
4	=	Fluorosilicone O-ring	(-55°C to +200°C)
5	=	Viton O-ring	(-20°C to +180°C)
6	=	EPDM O-ring	(-50°C to +110°C)

D **Certification order code**

E **Plating**

OO	=	Not plated
NP	=	Nickel Plated
ZP	=	Zinc

F **Thread Size**

Metric	=	M16/ M20/ M25/ M32/ M40/ M50/ M63/ M75/ M80/ M85/ M90/ M100
NPT/ NPSM BSPT/ BSPP	=	½"/ ¾"/ 1"/ 1 ¼"/ 1 ½"/ 2"/ 2 ½"/ 3"/ 3 ½"/ 4"
PG	=	7/ 9/ 11/ 13.5/ 16/ 21/ 29/ 36/ 42/ 48
NF C 68-312	=	PG48F

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Degree of protection

The Stopping Plugs, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection as defined in the table below.

Plug Type	Entry Hole Type	IP6X	IPX6	IPX8*
SPMH parallel thread	Threaded or Clearance	X	X	
SPHH parallel thread	Threaded or Clearance	X	X	
SPA parallel thread	Threaded	X	X	
SPB parallel thread	Threaded	X	X	
SPMH parallel thread with sealing ring	Threaded or Clearance	X	X	X
SPHH parallel thread with sealing ring	Threaded or Clearance	X	X	X
SPMH tapered thread	Threaded or Clearance	X	X	
SPHH tapered thread	Threaded or Clearance	X	X	
SPA tapered thread	Threaded	X	X	
SPB tapered thread	Threaded	X	X	
SPMH tapered thread with sealing ring	Threaded	X	X	
SPHH tapered thread with sealing ring	Threaded	X	X	
SPMH tapered thread with sealing ring	Clearance	X	X	X
SPHH tapered thread with sealing ring	Clearance	X	X	X

* IPX8 100 metres 7 days

When installed in unthreaded clearance holes, SPMH and SPHH stopping plugs shall be secured with an appropriate locknut and installed in accordance with the manufacturer's instructions

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	04 March 2010	R17198A/00	The release of prime certificate.

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15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 The Stopping Plugs shall not be used in conjunction with an adaptor or reducer when installed in a flameproof enclosure.

15.2 When no seal is fitted and the stopping plug is installed in an increased safety (Ex e) enclosure, the user shall ensure that a minimum degree of protection IP54 is maintained.

15.3 Where Stopping Plugs without sealing rings are installed in protection by enclosure (Ex t) equipment for use in explosive dust atmospheres, they may only be fitted into enclosures offering a minimum of 5 full threads, in accordance with IEC 60079-31:2008 clause 5.1.1.

15.4 The products are approved for a temperature range at their point of mounting based upon the interface seal:

0	=	No seal fitted	(-100°C to +400°C)
1	=	Nitrile O-ring	(-30°C to +100°C)
2	=	Neoprene O-ring	(-35°C to +90°C)
3	=	Silicone O-ring	(-60°C to +200°C)
4	=	Fluorosilicone O-ring	(-55°C to +200°C)
5	=	Viton O-ring	(-20°C to +180°C)
6	=	EPDM O-ring	(-50°C to +110°C)

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 Aluminium devices shall not be marked with any information indicating that they are suitable for Group I use.

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Certificate Annexe

Certificate Number: **Sira 09ATEX1320X**

Equipment: **SPA, SPB, SPMH and SPHH ranges of Stopping Plugs**

Applicant: **Peppers Cable Glands Ltd**

Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
PCG/ATX/SPMH	1 of 1	1	05 Feb 10	Mushroom head stopping plug Marking and drawing notes
PCG/ATX/S-1	1 of 1	1	05 Feb 10	Mushroom head stopping plug (metric)
PCG/ATX/S-2	1 of 1	1	05 Feb 10	Mushroom head stopping plug (NPT, NPSM)
PCG/ATX/S-3	1 of 1	1	05 Feb 10	Mushroom head stopping plug (PG)
PCG/ATX/SPHH	1 of 1	1	05 Feb 10	Hexagonal head stopping plug Marking and drawing notes
PCG/ATX/S-4	1 of 1	1	05 Feb 10	Hexagonal head stopping plug (metric)
PCG/ATX/S-5	1 of 1	1	05 Feb 10	Hexagonal head stopping plug (NPT, NPSM, BSPT, BSPP)
PCG/ATX/S-6	1 of 1	1	05 Feb 10	Hexagonal head stopping plug (PG)
PCG/ATX/SPA	1 of 1	1	05 Feb 10	External tamper proof stopping plug Type 'A' Marking and drawing notes
PCG/ATX/S-7	1 of 1	1	05 Feb 10	External tamper proof stopping plug (metric, PG, BSPP, NPSM)
PCG/ATX/S-8	1 of 1	1	05 Feb 10	External tamper proof stopping plug (NPT, BSPT)
PCG/ATX/SPB	1 of 1	1	05 Feb 10	Internal tamper proof stopping plug Type 'B' Marking and drawing notes
PCG/ATX/S-9	1 of 1	1	05 Feb 10	Internal tamper proof stopping plug (metric, PG, BSPP, NPSM
PCG/ATX/S-10	1 of 1	1	05 Feb 10	Internal tamper proof stopping plug (NPT, BSPT)
PCG/MATS/SB	1 of 1	1	26 Feb 10	Standard materials
PCG/ATX/PEXMP	1 of 1	1	22 Feb 10	Hazardous Area Approved Products Marking Plan

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