CERTIFICATE OF APPROVAL
No CF 339

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

EUROSPEC

Stancliffe Street, Millhill, Blackburn
Lancashire, BB2 2QR
Tel: 01254 274100 Fax: 01254 274111

Have been assessed against the requirements of the Technical Schedule(s) denoted below and are approved for use subject to the conditions appended hereto:

CERTIFIED PRODUCT	TECHNICAL SCHEDULE
Euro Spec CEN, HIN, H2N, H3N, and SCH Series of Hinges	**TS24 The Contribution of Single Axis Hinges to the Fire Resistance of Door Assemblies**

Signed and sealed for and on behalf of Exova (UK) Limited trading as Warrington Certification

Sir Ken Knight
Chairman
Impartiality Committee

Paul Duggan
Certification Manager

Issued:	20th July 2005
Reissued:	6th March 2017
Next audit test due:	06/03/2018
Frequency:	Annually
Valid to:	5th March 2022

This certificate is the property of Exova (UK) Limited trading as Warrington Certification
Reg. Office: Exova (UK) Limited, Lochend Industrial Estate, Newbridge, Midlothian EH28 8PL United Kingdom. Co. Reg. No. SC070429

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EUROSPEC

EURO SPEC CEN, HIN, H2N, H3N and SCH Series of Hinges

1. This approval relates to the use of the stated models of the CEN, HIN, H2N, H3N and SCH series hinges which are single axis hinges with square or radiused.

2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section D of the Technical Standards (Scotland) and Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.

3. This approval relates to the use of the above single axis hinges in contributing to the fire resistance performance of timber based doorsets and metallic based doorsets, as defined in BS EN 1634-1 or BS 476: Part 22: 1987.

4. This approval relates to their use with the following door assemblies:-

   Latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance up to 60 minutes (Code ITT).

   Latched and unlatched, door assemblies consisting of uninsulated or insulated metal door assemblies in metal frames with or without intumescent seals having a fire resistance up to 240 minutes (Code IMM/MM).

5. The hinges are approved on the basis of:

   i) Initial type testing to EN1935 and EN 1634-1
   ii) An appraisal against TS24
   iii) Certification of quality management system to ISO 9001: 2008.
   iv) Inspection and surveillance of factory production control
   v) On-going audit testing in accordance with TS24 requirements

6. The series of hinges comprise ranges of stainless and mild steel, single axis hinges, which may be for use on various classes of doorsets. The hinges are a minimum of Class 11 in accordance with BS EN 1935: 2002.

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7. This certification relates to the following variants of hinges:

Hinge	Maximum Leaf Weight
H2N1202, H3N1104, H3N1101,HIN13225, H2N1503/11, H3N1105/11, LOH1000	80 kg
H3N1103	100 kg
CEN 1433, CEN 1443, HIN 1433, HIN1443, H2N11015, H2N1102, H2N1103, H2N1424, H2N1435, H2N1446, H3N1207, H3N1208, HIN1433/HT, SCH14325, HIN 14325, H3N1102, HIN1433SEC, HIN1443SEC, SCH14325SEC, H2N1502/13, H3N1102A/13, H3N1107/13	120 kg
H2N1121, HIN1433/14, HIN1443/14, H3N1207/14	160 kg

8. This approval relates to the above hinge models incorporating various finishes.

9. This approval relates to the hinges CEN1433, HIN1433, HIN1433/14, HIN13225, H2N1424, HIN14325, HIN1433HT, HIN1433 SEC, SCH14325, SCH14325 SEC, H3N1207, H3N1207/14 H3N1104, H2N1435, H2N1446, H2N1103, H3N1102, H3N1208, H2N1202, H3N1101, H3N1103, H2N1102, LOH1000, H3N1105 and H2N1503 used with latched or unlatched single-leaf or double-leaf door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores and in timber frames (Codes TT and ITT) not less than 44 mm thick. The door frame shall consist of timber with a minimum density of 450 kg/m³ (with leaf to frame gaps less than 3mm), for FD20, FD30, E30 and EI30 applications.

10. This approval relates to the hinges CEN1433, HIN1433, HIN1433/14 HIN14325, CEN1443, HIN1443, HIN1443/14, HIN1443SEC, H2N1424, H2N11015, H2N1121, H3N1102, H3N1104, H3N1208, H2N1202, H3N1101, H3N1103, H2N1102, H2N1103, H3N1207, H3N1207/14, HIN1433/HT, SCH14325, HIN1433 SEC and SCH14325 SEC used with latched or unlatched single-leaf or double-leaf door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores with non-combustible sub-facings and in timber frames (Codes TT and ITT) not less than 52 mm thick. The door frame shall consist of timber with a minimum density of 650 kg/m³ (with leaf to frame gaps less than 3mm), for FD60, E60 and EI60 applications.

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EURO SPEC CEN, HIN, H2N, H3N and SCH Series of Hinges

11. This approval relates to the hinges H2N1446, H3N1107, H2N1435 and H2N1502 used with latched or unlatched single-leaf or double-leaf door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores and in timber frames (Code ITT) not less than 52 mm thick. The door frame shall consist of timber with a minimum density of 650 kg/m³ (with leaf to frame gaps less than 3mm), for FD60 applications only.

12. The CEN1433, HIN1433, HIN1433/14, HIN13225, HIN14325, HIN1433HT, HIN1433 SEC, SCH14325, SCH14325 SEC, H3N1207, H3N1207/14, H3N1104, H3N1105, H2N1435, H2N1446, LOH1000, H2N1503 and H2N1103 hinges must be bedded onto 1mm-thick Interdens or INT1433, INT1443 or INT1102 hinge liners (where appropriate), behind both blades for FD20, FD30, E30 and EI30 applications. Alternatively the hinges may be bedded on 0.8mm FS318 graphite based hinge bedding material as supplied by Eurospec.

13. The H3N1102, H3N1208, H2N1202, H3N1101, H3N1103 and H2N1102 shall not require intumescent bedding for FD20, FD30, E30 and EI30 applications.

14. The CEN1443, HIN1443, HIN1443/14, HIN1443SEC, H2N1424, H2N11015 and H2N1121 hinges must be bedded onto 2mm-thick Interdens behind both blades for 60 minute applications. Alternatively the hinges may be bedded on 0.8mm FS318 graphite based hinge bedding material as supplied by Eurospec. In addition to the hinge bedding, this hinge must also incorporate an additional Therm-A-Flex graphite based seal; 10mm x 4mm x 140mm-long positioned in the door frame rebate adjacent to the hinge, nearest to the frame stop for FD60, E60 and EI60 applications.

15. The CEN1433, HIN1433, HIN1433/14, HIN14325, HIN1433HT, HIN1433 SEC, SCH14325, SCH14325 SEC, H3N1207, H3N1207/14, H3N1104, H2N1103, H3N1102, H3N1208, H2N1202, H3N1101, H3N1103, H3N1102A and H2N1102 hinges must be bedded onto 2mm-thick Interdens behind both blades for 60 minute applications. Alternatively the hinges may be bedded on 0.8mm FS318 graphite based hinge bedding material as supplied by Eurospec. In addition to the hinge bedding, the door frame into which these hinges are to be fitted must also incorporate 2No. 20mm x 4mm-thick Palusol based intumescent seal in PVC carrier rebated into the frame at the head for FD60, E60 and EI60 applications.

16. The H2N1446, H2N1435, H3N1107 and H2N1502 hinges must be bedded onto 2mm-thick Interdens behind both blades for 60 minute applications for FD60 applications. Alternatively the hinges may be bedded on 0.8mm FS318 graphite based hinge bedding material as supplied by Eurospec.

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CERTIFICATE No CF 339
EUROSPEC

EURO SPEC CEN, HIN, H2N, H3N and SCH Series of Hinges

17. Failure to install intumescent protection identified above will invalidate this certificate

18. The above hinges may only be fitted to previously tested timber door assemblies when fitted in the manner described in this certificate and when particular aspects of the door assembly are maintained.

19. Hinges shall only be fitted using the fixings supplied by the hinge manufacturer. Regard should be paid to the maximum door mass permitted to be used with the hinge (see classifications).

20. The doorset, including door frame and associated building hardware, should be either CERTIFIRE approved for the relevant application and classification or the doorset, including door frame and associated building hardware, should have achieved the fire resistance as required when tested, or subsequently assessed to BS 476: Part 22: 1987 or BS EN 1634-1.

21. The ITT doorsets shall be installed in accordance with BS 8214.

22. The approval relates to on-going production. Product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

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23. The following table show acceptable doorset types and fire resistance periods:

	Approved Door Type				
Class	**IMM**	**MM**	**ITT**	**ITM**	**ITC**
FD20	✓	✓	✓	✗	✗
FD30	✓	✓	✓	✗	✗
FD60	✓	✓	✓	✗	✗
FD120	✓	✓	✗	✗	✗
FD240	✓	✓	✗	✗	✗
E 20	✓	✓	✓	✗	✗
EI 20	✓	✓	✓	✗	✗
E 30	✓	✓	✓	✗	✗
EI 30	✓	✓	✓	✗	✗
E 60	✓	✓	✓	✗	✗
EI 60	✓	✓	✓	✗	✗
E 90	✓	✓	✗	✗	✗
EI 90	✓	✓	✗	✗	✗
E 120	✓	✓	✗	✗	✗
EI 120	✓	✓	✗	✗	✗
E 240	✓	✓	✗	✗	✗
EI 240	✓	✓	✗	✗	✗

Key: ✓ - Approved
✗ - Not approved

NOTE: -

CEN1443, HIN1443, HIN1443/14, HIN1443SEC, H2N11015, H3N1107, 3N1102A, H2N1502 and H2N1121 are not approved for FD30, E30 and EI30 applications.

HIN13225 is not approved for FD60, E60 and EI60 applications.

H2N1446, H2N 1435, H3N1107 and H2N1502 are not approved for E60 and EI60 applications.

Only the following hinge models are approved for use with IMM/MM metallic based doorsets: H2N1102, H2N1103, HIN1433, SCH14325, H3N1103, H3N1102, H3N1102A, H3N1207, H3N1207/14H3N1208, HIN1433, HIN1433/14, CEN1433, CEN1443, H2N11015, HIN14325, HIN1433HT, HIN1443, HIN1443/14, HIN1433SEC, HIN1443SEC, SCH14325SEC and H2N1121.

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24. Doors are classified as the following types:

Type MM - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that do not contain intumescent materials in the frame to leaf gap.

Type IMM - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that contain intumescent materials in the frame to leaf gap.

Type ITT - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in timber frames

Type ITM - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in metal frames.

Type ITC - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in proprietary composite frames, of which the principal material is other than timber or metal but which may include any other materials.

Scope of Approval:

- Both blades of the hinges CEN1433, HIN1433, HIN1433/14, HIN13225, HIN14325, HIN1433HT, HIN1433 SEC, SCH14325, SCH14325 SEC, H3N1207, H3N1207/14, H3N1104, H3N1105, H2N1435, H2N1446, LOH1000, H2N1503 and H2N1103 must be bedded onto 1mm-thick Interdens, INT1433, INT1443 or INT1102 hinge liners (where appropriate), when used with TT or ITT doorsets for FD20, FD30, E30 and EI30 applications.

- The H3N1102, H3N1208, H2N1202, H3N1101, H3N1103 and H2N1102 hinges do not require intumescent bedding when used with TT or ITT doorsets for FD20, FD30, E30 and EI30 applications.

- Both blades of the hinges CEN1443, HIN1443, HIN1443/14, HIN1443SEC, H2N1424, H2N11015 and H2N1121 must be bedded onto 2mm-thick Interdens when used with ITT doorsets. In addition to the Interdens, this hinge must also incorporate an additional Therm-A-Flex graphite based seal, 10mm x 4mm x 140mm-long positioned in the door frame rebate adjacent to the hinge, nearest to the frame stop for ITT FD60, E60 and EI60 applications.

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CERTIFICATE No CF 339
EUROSPEC

EURO SPEC CEN, HIN, H2N, H3N and SCH Series of Hinges

Scope of Approval (continued):

- Both blades of the hinges CEN1433, HIN1433, HIN1433/14, HIN14325, HIN1433HT, HIN1433 SEC, SCH14325, SCH14325 SEC, H3N1207, H3N1207/14, H3N1104, H2N1103, H3N1102, H3N1208, H2N1202, H3N1101, H3N1103, H3N1102A and H2N1102 must be bedded onto 2mm-thick Interdens for 60 minute applications. In addition to the Interdens, the door frame into which these hinges are to be fitted must also incorporate 2No. 20mm x 4mm-thick Palusol based intumescent seal in PVC carrier rebated into the frame at the head when used with ITT doorsets for FD60, E60 and EI60 applications.

- Both blades of the hinges H2N1446, H2N1435, H3N1107 and H2N1502 hinges must be bedded onto 2mm-thick Interdens behind both blades for 60 minute applications when used with ITT doorsets for FD60 applications.

- For all intumescent hinge bedding requirements above, alternatively the hinges may be bedded on 0.8mm FS318 graphite based hinge bedding material as supplied by Eurospec.

- The door frame of ITT doorsets shall consist of timber with a minimum density of 450 kg/m³ and 640 kg/m³ (with leaf to frame gaps less than 3mm) for 30 and 60 minute applications respectively.

- Hinges approved for use with IMM/MM metallic based doorsets are not required to be fitted with intumescent bedding.

Classification codes

The above approval provides the following classifications:

H2N1202, H3N1104, H2N1503, H3N1105 and H3N1101 – Maximum leaf weight 80kg

3	7	4	1	1	3	0	11

H2N1202, LOH1000, H2N1503 and HIN13225 – Maximum leaf weight 80kg

3	7	4	1	1	4	0	11

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Classification codes (continued)

H3N1103 – Maximum leaf weight 100kg

4	7	5	1	1	3	0	12

H2N1102, H2N1103, H3N1102, H3N1207, H3N1208, H2N1502, H3N1102A, H3N1107 and HIN1433 – Maximum leaf weight 120kg

4	7	6	1	1	3	0	13

CEN1433, CEN1443, HIN1433, HIN1443, H2N11015, H2N1102, H2N1103, H2N1424, H2N1435, H2N1446, H3N1207, H3N1208, HIN1433/HT, SCH14325, H2N1502 and HIN14325 – Maximum leaf weight 120kg

4	7	6	1	1	4	0	13

HIN1433SEC, HIN1443SEC and SCH14325SEC – Maximum leaf weight 120kg

4	7	6	1	1	4	1	13

H2N1121, HIN1433/14, HIN1443/14 and H3N1207/14 – Maximum leaf weight 160kg

4	7	7	1	1	4	0	14

Note: Where a hinge model appears against two separate classifications, the entry with a lower corrosion resistance (sixth digit) denotes the mild steel version.

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Further Information

Further information regarding the details contained in this data sheet may be obtained from Eurospec Architectural Hardware Limited (Tel: 01254 274100).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).

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