CERTIFICATE OF APPROVAL
No CF 629

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

NORSEAL LIMITED

Norseal House, Unit 5 Regents Drive,
Prudhoe, Northumberland NE42 6PX

Tel: 01661 831 311

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
Norsound NOR710, NOR720, NOR810 & NOR820 Smoke and Acoustic Seals	TS21 The Contribution of Edge Seals to the Control of Smoke Leakage via Door Assemblies

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager

Issued:	26th February 2009
Reissued:	23rd November 2023
Valid to:	12th January 2029

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NORSOUND NOR710, NOR720, NOR810 & NOR820 SMOKE AND ACOUSTIC SEAL

1. This certification is provided to the client for their own purposes, and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.

2. This approval relates to the use of the following specific Norseal smoke and acoustic seals.

Product Reference	Timber Based Door Assemblies	Steel Based Door Assemblies
NOR710	✓	×
NOR720	✓	×
NOR810	✓	×
NOR820	✓	×

Table 1

3. Within BS 9999, a fire door required to resist the passage of smoke at ambient temperature conditions should, when tested in accordance with BS 476: Section 31.1 with the threshold taped and subjected to a pressure of 25 Pa, have a leakage not exceeding 3 m3/m/h. The threshold gap should be sealed either by a seal either with a leakage rate not exceeding 3m3/m/h at 25 Pa or just contacting the floor. Where this is impracticable the threshold gap should not exceed 3 mm at any point.

4. Norseal NOR710 and NOR720 smoke and acoustic seals are of the compression/deflection (C/D) type. They are used for sealing door assemblies against leakage of ambient temperature smoke, as defined in BS 476: Part 31.1: 1983. They do not contain intumescent material.

5. Norseal NOR810 and NOR820 smoke and acoustic seals are aluminium cased automatic threshold seals. They used for sealing the threshold of door assemblies against leakage of ambient temperature smoke, as defined in BS 476: Part 31.1: 1983. They do not contain intumescent material.

6. The door seals are approved on the basis of:

   i) Initial type testing
   ii) A design appraisal against TS21
   iii) Certification of a suitable quality management system.
   iv) Inspection and surveillance of factory production control
   v) Audit testing

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CHF68939-1 & CHF68939-2

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7. This approval certifies that the Norseal, NOR710, NOR720, NOR810 and NOR820 seals are suitable for use with single-acting, hinged, door assemblies required to restrict smoke leakage at ambient temperatures as defined in Appendix B of Approved Document B, 'Fire Safety' to the Building Regulations 2010. It is applicable to latched and unlatched, single leaf and double leaf assemblies consisting of timber faced and edged leaves with timber, cellulosic cores in timber frames with or without intumescent edge seals (Code ITT and TT respectively). It is only applicable to assemblies that have been approved, or have been shown by test, to achieve the required period of fire resistance.

8. The NOR710 and NOR720 perimeter seals shall be uninterrupted and fixed around the head and vertical edges of the frame. Double leaf assemblies shall additionally incorporate an approved smoke seal at the meeting edges. The seals shall be installed in accordance with the seal manufacturer's instructions.

9. The NOR810 and NOR820 threshold seals shall be uninterrupted and fixed to the bottom edge of door leaves. Double leaf door assemblies shall additionally incorporate a threshold seal to both door leaves. The seals shall be installed in accordance with the manufacturer's instructions.

10. The following table shows acceptable doorset types and fire resistance periods:

Door Assembly Type							
	ITT			ITM / ITC			IMM / MM
Class	C	H	I-O	C	H	I-O	M
FD20	✓	✓	✓	×	×	×	×
FD30	✓	✓	✓	×	×	×	×
FD60	✓	✓	✓	×	×	×	×

Table 2: Universal Matrix for Field of Application

11. Doors are classified as the following types:

Type MM - 20 minute to 240 minute doorsets consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames without intumescent seals.

Type IMM - 20 minute to 240 minute doorsets consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames with intumescent seals.

Type ITT - 20 minute to 120 minute door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in timber or cellulosic frames.

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CHF68939-1 & CHF68939-2

Type ITM - 20 minute to 120 minute door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in steel frames.

NORSOUND NOR710, NOR720, NOR810 & NOR820 SMOKE AND ACOUSTIC SEAL

12. It is sometimes necessary to sub-divide fire doors into the following categories:

Type C - Door leaves where all parts of the construction are of timber or other cellulosic material, e.g., flaxboard, chipboard, fibreboard etc, or leaves where inorganic or mineral based materials are surrounded by softwood or hardwood framing. The mineral based material may be in the form of a solid slab or as sub-facings either side of a void, with or without intermediate rails. The timber framing must be unprotected for not less than 40mm which includes any lipping. The framing may be reinforced by additional timber or similar material at the head or at lock blocks to product a larger frame to support ironmongery.

Type I-O - Door leaves constructed primarily of inorganic, or mineral based materials where the surrounding frame of timber is less than 40mm wide, including any lippings.

Type H - Door leaves where a type 'C' door leaf, normally all of cellulosic construction is faced on both sides with an inorganic board or a rigid intumescent sheet material not less than 2mm thick, either as a facing or a sub-facing. This material will extend from leaf edge to leaf edge, excluding any lippings.

Type M - Door leaves where the facings or sub-facings are of a steel construction and where the edges are metal (excluding any seals fitted), including primarily glazed leaves where the structural leaf framing consist of metal sections.

13. The acoustic performance of the above seals is not considered as part of this appraisal.

14. The approval relates to ongoing production. The product and/or its immediate packaging is identified with the manufacturers' 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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CHF68939-1 & CHF68939-2

CERTIFICATE No CF 629
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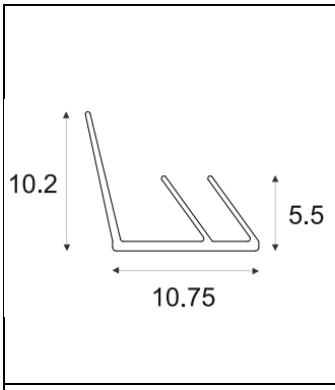	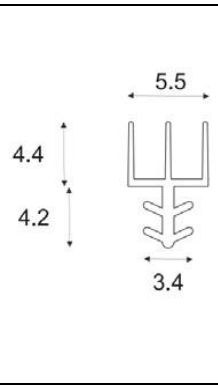	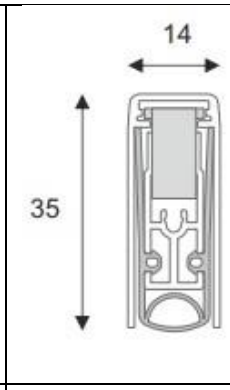	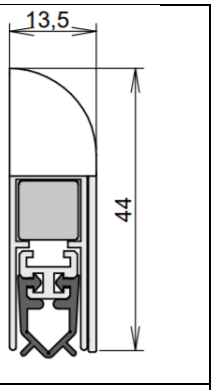
NOR710	NOR720	NOR810	NOR820
Figure 1. Drawings of Seals (not to scale)			

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