



CERTIFICATE OF APPROVAL

No CF 280

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

MANN MCGOWAN FABRICATIONS LIMITED

Intumescent House, 4 Brook Trading Estate, Deadbrook Lane,
Aldershot, Hampshire, GU12 4XB
Tel: 01252 333601 Fax: 01252 322724

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

Mann McGowan Enviroseal SS5,
Flexifin 5, Twinfin 5, ACS-1, DD-420S
& DD-1703ACU Smoke Seals

TECHNICAL SCHEDULE

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: 11th June 2002
Revised: 16th August 2021
Valid to: 30th October 2025





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MANN MCGOWAN FABRICATIONS LIMITED

Mann McGowan Smoke Seals

1. This approval relates to the use of the above door seals in contributing to the performance of doorsets against the leakage of ambient temperature smoke, as defined in BS 476: Part 31.1: 1983 subject to the undermentioned conditions.
2. 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.
3. The Mann McGowan perimeter seals approved in this certificate comprise a range of brush pile and elastomeric smoke seals. They are used for sealing the door leaf to frame perimeter gaps against leakage of ambient temperature smoke, as defined in BS 476: Part 31.1: 1983. They do not contain intumescent material.
4. The Mann McGowan dropseals approved in this certificate are aluminium cased automatic threshold seals. They are 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.
5. Within BS 9999: 2017, 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. Threshold gaps for timber doors should be in accordance with BS 8214. Threshold gaps for all other door types should be based on the principles set out in BS8214.
6. This approval relates to doorsets with door leaf to frame perimeter gaps of between 3.5mm and 4.5mm.
7. The door seals are approved on the basis of:
 - i) Initial type testing
 - ii) A design appraisal against TS21
 - iii) Certification of quality management system to ISO 9001: 2015.
 - iv) Inspection and surveillance of factory production control
 - v) Audit testing

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Mann McGowan Smoke Seals

8. This approval certifies that the above seals are suitable for use with single or double-acting, 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 1991. It is applicable to latched and unlatched, single leaf and double leaf assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral 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.
9. The doorsets into which the seals are to be fitted may be single or double-acting and single or double leaf as follows:
- Enviroseal SS5 continuous around double acting doors
 - Enviroseal SS5 continuous around single acting doors
 - Flexifin 5 continuous around single acting doors
 - Flexifin 5 continuous around double acting doors.
 - Twinfin 5 continuous around single acting doors
 - Twinfin 5 continuous around double acting doors
 - Twinfin 5 interrupted at hinges and latch around single acting doors.
 - ACS-1 continuous around single acting doors
 - DD-420S continuous to the bottom edge of the door leaf
 - DD-1703ACU continuous to the bottom edge of the door leaf
10. The SS5 and Flexifin seals shall be fixed continuously around the head and vertical edges of the frame along the centre line of the door frame rebate bypassing any hinge and latch items.
11. The Twinfin seals shall be fixed around the head and vertical edges of the frame along the centre line of the door frame rebate and the Twinfin 5 seals may only be interrupted at the hinge and latch positions by a total length of 321mm.
12. The ACS-1 seal shall be fixed continuously around the head and vertical edges of the frame against the stop / rebate of the door frame bypassing any hinge and latch items.

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13. The DD-420S and DD-1703ACU 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.
14. The seals shall be installed in accordance with the manufacturer's instructions.
15. The following table shows acceptable doorset types and fire resistance periods:

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

Table 1: Universal Matrix for Field of Application

16. Doors are classified as the following types:

Code ITT - 20 minute to 120 minute doorsets containing intumescent seals and consisting of timber faced and edged leaves with timber, cellulosic or mineral cores, hung in timber-based frames.

Code ITM - 20 minute to 120 minute doorsets containing intumescent seals and consisting of timber faced and edged leaves with timber, cellulosic or mineral cores, hung in metal frames.

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

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

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

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17. 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 steel (excluding any seals fitted), including primarily glazed leaves where the structural leaf framing consist of metal sections.

18. The seals shall be installed in accordance with the manufacturer's instructions. The doorset shall be installed in accordance with BS 8214.
19. The approval relates to ongoing production. 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.

Further Information

Further information regarding the details contained in this data sheet may be obtained from Mann McGowan Fabrications Limited (Tel: 01252 333601).

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

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