



CERTIFICATE OF APPROVAL

No CF 5179

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

ASSA ABLOY LIMITED T/A LORIENT

Portobello Works, School Street, Willenhall, WV13 3PW, United
Kingdom

Tel: 01626 834252

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

LORIENT Smoke and
Acoustic 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: 28th October 2013
Revised: 15th November 2023
Valid to: 14th November 2028





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LORIENT Smoke and Acoustic Seals

1. This certification is provided to the client for its 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 Lorient smoke and acoustic seals.

Product Reference	Timber Based Door Assemblies	Steel Based Door Assemblies
LAS1010	✓	x
LAS1212	✓	x
LAS1212K	✓	x
LAS1011	✓	x
LAS1015	✓	x
LAS7001si	✓	✓
LAS7002si	✓	x
LAS7003si	✓	x
AAS7501	✓	x
AAS7502	✓	x
AAS7503	✓	x
LAS8005si	✓	x
LAS8001si	✓	x
LAS8002si	✓	x
LAS8003si	✓	x
AAS8501	✓	x
AAS8503	✓	x
LAS8004si	x	✓
LAS4014si	x	✓
LAS1007	x	✓

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 476-31.1 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 by a seal either with a leakage rate not exceeding 3m³/m/h at 25 Pa when tested to BS 476-31.1 or just contacting the floor. Where this is impracticable the threshold gap should not exceed 3 mm at any point.

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4. Lorient LAS1010, LAS1212, LAS1212K, LAS1011, LAS1015, LAS7001si, LAS7002si, LAS7003si, AAS7501, AAS7502, AAS7503, LAS4014si and LAS1007 smoke and acoustic seals are of the compression/deflection (C/D) type or the wiping (WS) type. They are used for sealing door assemblies against leakage of ambient temperature smoke, as defined in BS476: Part 31.1: 1983. They do not contain intumescent material.
5. Lorient LAS8005si, LAS8001si, LAS8002si, LAS8003si, AAS8501, AAS8503 and LAS8004si seals 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.
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
7. This approval certifies that Lorient 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 (See Table 1 for seal suitability).
8. This approval certifies that Lorient 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 uninsulated or insulated predominantly steel leaves, hung in steel frames with or without intumescent edge seals (Code IMM and MM 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 (See Table 1 for seal suitability).
9. The 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.

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10. 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 seal manufacturer's instructions.
11. The LAS8004si, LAS1007, LAS7001si and LAS4014si seals are suitable for use on steel-based door assemblies / doorsets (See Table 1).
12. The following tables shows acceptable doorset types and fire resistance periods:

Door Assembly Type – Timber Based Door Assemblies*		
Class	ITT	ITM
FD20	✓	✗
FD30	✓	✗
FD60	✓	✗
FD90	✗	✗
FD120	✗	✗

Table 2: Universal Matrix for Field of Application

*See Table 1 & Table 4 for seal suitability

Door Assembly Type – Steel Based Door Assemblies*	
Class	IMM / MM
FD20	✓
FD30	✓
FD60	✓
FD90	✓
FD120	✓

Table 3: Universal Matrix for Field of Application

*See Table 1 & Table 5 for seal suitability



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13. 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-based frames.

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.

14. The approval relates to on-going 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.

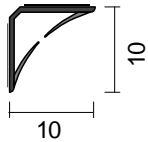
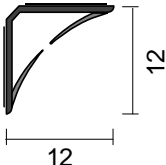
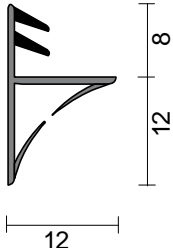
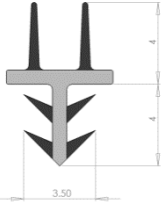
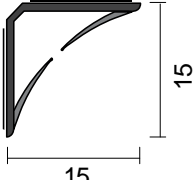
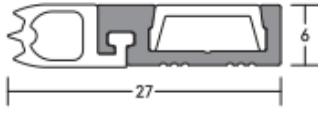
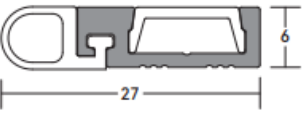
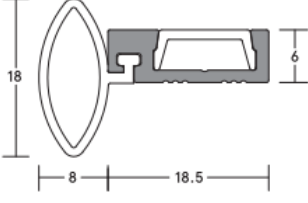
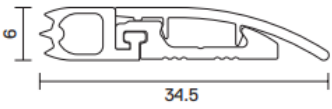
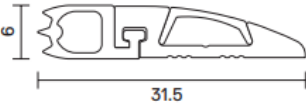
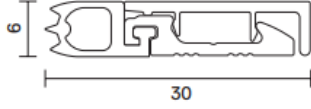
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Table 4. Drawings of seals – Timber Based Door Assemblies

		
LAS1010	LAS1212	LAS1212K
		
LAS1011	LAS1015	
		
LAS7001si	LAS7002si	LAS7003si
		
AAS7501	AAS7502	AAS7503

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Table 4 (Continued). Drawings of seals – Timber Based Door Assemblies		
LAS8005si	LAS8001si	LAS8002si
LAS8003si	AAS8501	AAS8503

15. The seals detailed in Table 4 are suitable for use on timber-based door assemblies / doorsets.

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<u>Table 5. Drawings of seals – Steel Based Door Assemblies</u>		
LAS8004si	LAS7001si	LAS1007
LAS4014si		

16. The seals detailed in Table 5 are suitable for use on steel-based door assemblies / doorsets.
17. The acoustic performance of the seals detailed within Table 1, Table 4 and Table 5 is not considered as part of this appraisal.
18. This certificate of approval relates to doorsets with door to frame gaps of between 3 mm and 4 mm.