



CERTIFICATE OF APPROVAL

No CF 6153

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

Merlin Architectural Ltd

Rossmore House, Rossmore Road East,
Ellesmere Port, Cheshire, CH65 3DA, United Kingdom

Tel: 0151 356 7598

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
Locks and Latches

TECHNICAL SCHEDULE
TS23 The Contribution of
Locks and Latches to the
Performance of Fire Resisting
of Doorsets

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

Paul Duggan
Certification Manager



Issued:
Valid to:

1st June 2023
2nd December 2026





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Locks and Latches

1. This approval applies only to the locks and latches as follows:

Mortice Case Locks	
Code	Description
31.01 / 32.01	Mortice Sashlock
31.02 / 32.02	Mortice Deadlock
31.04 / 32.04	Mortice Latch
31.03 / 32.03	Mortice Bathroom Lock
31.05 / 32.05	Mortice Nightlatch

Options:
- 55mm or 60mm Backset
- Square or Radiused Forend

The range is supplied with a 235 mm x 22 mm forend, 14 mm thick case and minimum latchbolt throw of 12.5 mm. The lockcase is steel, and the forends, latch bolts, dead bolts and strike plates are all of stainless steel.

2. 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.
3. 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 or cellulosic cores in timber frames having a fire resistance of up to 120 minutes (Code ITT).

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

**EN12209 applications only.*

4. The locks and latches are approved on the basis of:
- i) Initial type testing to EN 1634-1 and EN 12209: 2003
 - ii) An appraisal against TS23
 - iii) Certification of quality management system.
 - iv) Inspection and surveillance of factory production control
 - v) On-going audit testing in accordance with TS23 requirements



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5. The mortice locks and/or latches should only be used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987) with similar size locks and strikeplates, the critical aspects of the doorset construction are considered to be the material of the door frame, the leaf to frame clearance gaps and the lipping material. Attention should be paid to these details, and these should not be amended from that previously fire tested. The following minimum specification will be followed:

Timber-based assemblies:

- i) Door frame density - 450 kg/m³ (30 minutes), 640 kg/m³ (60 minutes)
- ii) Door leaves shall have a minimum thickness of 44 mm for 30 minute applications and 54 mm for 60 minute applications.
- iii) Lipping density - 640 kg/m³.

Steel-based assemblies (Code MM/IMM)

- i) Door leaves shall have a minimum thickness of 44 mm for up to 240 minute applications.
 - ii) No additional intumescent protection is required.
6. When fitted to 30 minute and 60 minute insulated timber door assemblies (ITT), the required protection will be as follows:

Option 1 (not permitted where plastic dustboxes are fitted):

- i) The required protection for 30 minute ITT applications will be 1 mm thick Interdens mono ammonium phosphate intumescent sheet material around the lock case and behind the forend and strike plate.
- ii) The required protection for 60 minute ITT applications will be 1 mm thick Interdens mono ammonium phosphate intumescent sheet material around the lock case, and 2 mm thick intumescent sheet material behind the forend and strike plate.
- iii) Additionally, for 60 minute ITT applications only, the perimeter intumescent within the frame/door edge shall by-pass the strike plate or forend by a minimum of 7 mm wide on each side (with the exception of the latchbolt lead where present).



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Option 2 (To be used with or without plastic dustboxes are fitted):

- i) 30 & 60 minutes ITT applications – Kit reference ZID30G consisting of a 1 mm thick graphite-based intumescent sheet material around all sides and edges of the lock case and a bedding of the same type of material behind the forend and strike plate.
- ii) No additional intumescent protection is required around the plastic dustbox.
- iii) Additionally, for 60 minute ITT applications only, the perimeter intumescent within the frame/door edge shall by-pass the strike plate or forend by a minimum of 7 mm wide on each side (with the exception of the latchbolt lead where present).

Note: Failure to install the protection will invalidate this certificate

- 7. A plastic dustbox may be incorporated behind the strikeplates for 30 minute and 60 minute ITT applications only (see section 6 Option 2 above).
- 8. Timber/mineral-based assemblies (Code ITT 90 and ITT120)

Merlin branded locks and latches shall only be fitted in 90 and 120 minute ITT doorsets which have previously been tested with locks/latches of a similar size and specification, subject to the following requirements:

- i. The required intumescent protection shall be as tested by the chosen door manufacturer. in all cases this shall be a minimum of a 2 mm thick Interdens mono ammonium phosphate or graphite-based intumescent sheet material incorporated around the lock case, and a bedding of the same type and thickness of intumescent material behind the forend and strike plate/keep, however, this protection shall be increased as required based on the chosen doorset manufacturers test data.
- ii. Where chosen doorsets are approved in latched configurations only, the chosen doorset shall have been tested with a maximum latch bolt throw of 13 mm.
- iii. Where cylinders are required the chosen doorset shall have been successfully tested with single or double cylinders as required.



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- iv. The chosen doorset shall have been successfully tested with a lock/latch of the following minimum size:

Component/dimension	Size (mm)
<i>Basic lockcase:</i>	
• Forend width	22
• Forend Height	235
• Forend thickness	2.7
• Case height	165
• Case width	85
• Case thickness	15
<i>Strike plate:</i>	
• Strike plate width	24 (exc. Lip)
• Strike plate height	180
• Strike plate thickness	1.5
• Strike plate lip height	135

9. Lock assemblies not incorporating a latching mechanism and those fitted with a roller latch shall only be fitted to proven unlatched doorset assemblies.
10. The locks/latches should not be fitted higher than 1100 mm from the finished floor level of the surrounding floors.
11. Cylinders shall only be fitted to doors which have previously been shown capable of accommodating the installation of cylinder locks without detriment to the doorset's performance.
12. The mortice locks may incorporate Euro profile cylinders as follows:
- i) Single cylinder
 - ii) Double cylinder
 - iii) Cylinder and thumbturn
 - iv) Brass or steel cylinders for ITT30 and 60 doorsets
 - v) Steel cylinders only for ITT90 and 120 and MM/IMM 240 doorsets

Note: The hole in the door face shall follow the shape of the cylinders and be as tight as possible; furthermore, the single cylinders door preparation will penetrate through only half the thickness of the door leaf)



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13. The spindle hole through the door shall be a maximum of 16 mm diameter unless the doorset has test evidence that proves spindle holes of a greater size than this.
14. Recessing for locks shall result in a tight fit, allowing for any intumescent protection where required. Mortices for the latchbolt and deadbolt behind the strikeplate shall be as small as possible.
15. ITT30 and ITT60 doorsets shall be installed in accordance with BS 8214.
16. The approval relates to on-going production. Product and/or its immediate packaging are 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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17. The following table shows acceptable doorset types and fire resistance periods:

Class	Approved Door Type			
	IMM	MM	ITT	ITM
FD20	✓	✓	✓	✗
FD30	✓	✓	✓	✗
FD60	✓	✓	✓	✗
FD90	✓	✓	✓	✗
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



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18. 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 or cellulosic 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 or cellulosic cores, hung in steel frames.

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.

Scope of Approval

- The locks may not be fitted to timber doorsets without perimeter intumescent fire seals to the frame rebate or door edge.
- ITT door leaves shall have solid lignocellulosic construction in the lock area encompassing the entire lock case.
- Strikeplates/keeps - The locks/latches are approved with a range of strikeplates/keeps. All of which are steel, and a maximum size permitted for as follows:

Merlin branded locks	
width	24 mm (exc. Lip)
height	170 mm
thickness	1.5 mm
Latchbolt- lip height	65 mm



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Scope of Approval – Cont'd:

- The lock keeps/strikeplates in 30 and 60 minute ITT doorset only may incorporate plastic back-boxes providing the intumescent protection identified in Section 6 Option 2 is maintained.

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19. Approved lock/latch models and classifications.

Lock/Latch Reference	Description	Classification to EN 12209: 2003											
31.01 / 32.01	Mortice Sashlock	3	X	8	1	0	G	2	B	C	2	0	
31.02 / 32.02	Mortice Deadlock	3	X	8	1	0	G	2	B	C	0	0	
31.04 / 32.04	Mortice Latch	3	X	8	1	0	G	-	B	0	2	0	
31.05 / 32.05	Mortice Nightlatch	3	X	8	1	0	G	1	B	B	2	0	
31.03 / 32.03	Mortice Bathroom Lock	3	X	8	1	0	G	-	B	G	2	0	

Further Information

Further information regarding the details contained in this certificate may be obtained from Merlin Architectural Ltd (Tel: 0151 356 7598).

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