

REPORT SPONSOR: MCGRATH LOCKS PTY LTD

# DOOR HARDWARE ASSESSMENT



Test standard: Section 2 and appendix B11 of AS 1530.4:2014

Product: McGrath ML Stafford Smart Lock with a dormakaba MS2902 mortice and McGrath Scar Plate, over a redundant 54 mm diameter cylindrical hole

Reference number: FRT251979

Test date: 22 August 2025

Revision: DHAR1.0



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## 1.0 Introduction

This report documents the findings of the assessment undertaken to determine the expected fire resistance level (FRL) of a lockset tested in accordance with section 2 and appendix B11 of AS 1530.4:2014<sup>1</sup> and assessed in accordance with AS 1905.1:2015<sup>2</sup>.

Jensen Hughes performed this assessment at the request of the test sponsor listed in Table 1. Table 2 lists the hardware supplier.

*Table 1 Test sponsor details*

| Test sponsor          | Address                                                 |
|-----------------------|---------------------------------------------------------|
| McGrath Locks Pty Ltd | Unit 4/36 Windorah St<br>Stafford QLD 4053<br>Australia |

*Table 2 Hardware manufacturer details*

| Doorset supplier | Address                                               |
|------------------|-------------------------------------------------------|
| Firecore Pty Ltd | 291 Warringah Rd<br>Beacon Hill NSW 2100<br>Australia |

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<sup>1</sup> Standards Australia, 2014, Methods for fire tests on building materials, components and structures – Part 4: Fire-resistance tests for elements of construction, AS 1530.4:2014, Standards Australia, NSW.

<sup>2</sup> Standards Australia, 2015, Components for the protection of openings in fire-resistant walls Fire-resistant doorsets, AS 1905.1:2015, Standards Australia, NSW.

## 2.0 Variations considered in this report

The variations considered in this report are:

Fitting lockset instead of the corresponding hardware installed on the doorsets in the referenced test reports listed in Table 3. Table 4 provides additional supporting information about the tested specimen.

*Table 3 Referenced test reports*

| Test reference | Doorset description                                                                           | Test standard  |
|----------------|-----------------------------------------------------------------------------------------------|----------------|
| FSV 1382a      | Single leaf TVC30 core Firecore doorset, nominally 38 mm thick.                               | AS 1530.4:2005 |
| FSV 1418a      | Single leaf TVC40 core Firecore doorset, nominally 48 mm thick.                               | AS 1530.4:2005 |
| FSV 1391a      | Double leaf TVC40 core Firecore doorset, nominally 48 mm thick.                               | AS 1530.4:2005 |
| FSV 2133       | Single leaf TVC30 core Firecore doorset, nominally 37 mm thick.                               | AS 1530.4:2014 |
| FSV 1954       | Single leaf TVC40 core Firecore doorset, nominally 47 mm thick.                               | AS 1530.4:2014 |
| FSV 1928       | Double leaf TVC40 core Firecore doorset, nominally 48 mm thick – opening towards fire source. | AS 1530.4:2014 |

*Table 4 Additional supporting information*

| Test report    | Test date      | Doorset description                                             | Test duration | Test standard  |
|----------------|----------------|-----------------------------------------------------------------|---------------|----------------|
| FRT251979 R1.0 | 22 August 2025 | Single leaf TVC30 core Firecore doorset, nominally 38 mm thick. | 120 minutes   | AS 1530.4:2014 |

### 3.0 Description of the tested door hardware

Table 5 describes the tested door hardware. This information was provided by the test sponsor and the hardware was surveyed by Jensen Hughes.

Photographs of the test specimen are included in Figure 1 to Figure 5.

All measurements were done by Jensen Hughes – unless indicated otherwise.

*Table 5 Specimen description*

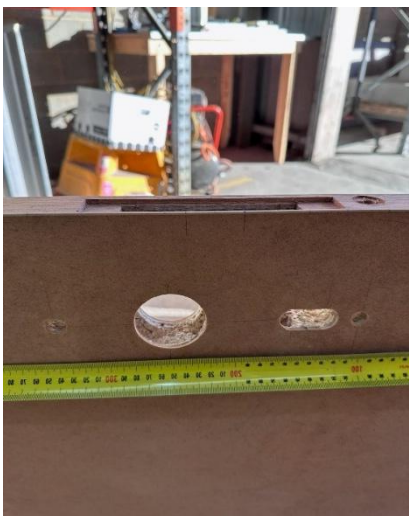
| Item Name                  | Description                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                         |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Door hardware product name | McGrath ML Stafford Smart Lock with a dormakaba MS2902 mortice and McGrath Scar Plate, over a redundant 54 mm diameter cylindrical hole                                                                                                                                                                                                                                                        |                                                                                         |
| Manufacturer/supplier      | McGrath Locks Pty Ltd                                                                                                                                                                                                                                                                                                                                                                          |                                                                                         |
| Latch material             | Latch bolt                                                                                                                                                                                                                                                                                                                                                                                     | Stainless steel                                                                         |
|                            | Cover plate                                                                                                                                                                                                                                                                                                                                                                                    | Stainless steel                                                                         |
|                            | Retainer plate                                                                                                                                                                                                                                                                                                                                                                                 | Stainless steel                                                                         |
|                            | Strike plate                                                                                                                                                                                                                                                                                                                                                                                   | Stainless steel                                                                         |
|                            | Latch body material                                                                                                                                                                                                                                                                                                                                                                            | Stainless steel and steel                                                               |
| Lock type                  | Mortice Lock                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                         |
| Lock details               | Cut out                                                                                                                                                                                                                                                                                                                                                                                        | To fit the mortice body                                                                 |
|                            | Latchset body                                                                                                                                                                                                                                                                                                                                                                                  | 120 mm × 118 mm × 16 mm                                                                 |
|                            | Cover plate                                                                                                                                                                                                                                                                                                                                                                                    | 175 mm × 25 mm × 2 mm                                                                   |
|                            | Strike plate                                                                                                                                                                                                                                                                                                                                                                                   | 70 mm × 46 mm × 1.4 mm                                                                  |
|                            | Retainer plate                                                                                                                                                                                                                                                                                                                                                                                 | 175 mm × 25 mm × 2 mm                                                                   |
|                            | Backset                                                                                                                                                                                                                                                                                                                                                                                        | 95 mm                                                                                   |
|                            | Throw                                                                                                                                                                                                                                                                                                                                                                                          | 15 mm                                                                                   |
| Furniture material         | Body                                                                                                                                                                                                                                                                                                                                                                                           | Stainless steel, steel, rubber gasket, plastic, electronic parts, wiring and batteries. |
|                            | Lever                                                                                                                                                                                                                                                                                                                                                                                          | Aluminium Alloy                                                                         |
| Furniture size             | Body                                                                                                                                                                                                                                                                                                                                                                                           | 260 mm × 45 mm × 22 mm                                                                  |
|                            | Lever                                                                                                                                                                                                                                                                                                                                                                                          | 133 mm × 22 mm × 20 mm                                                                  |
| Scar plate                 | Size                                                                                                                                                                                                                                                                                                                                                                                           | 296 mm × 68 mm × 2 mm                                                                   |
|                            | Material                                                                                                                                                                                                                                                                                                                                                                                       | Stainless steel                                                                         |
| Installation               | <p>An unfilled 54 mm diameter cylindrical hole was cut out in the door leaf, to represent a pre-existing redundant hole.</p> <p>The scar plate was installed to cover the cut-out hole in the door leaf, such that the bottom of the scar plate was 125 mm from the bottom of the door leaf.</p> <p>The centre of the lockset spindle was located 240 mm from the bottom of the door leaf.</p> |                                                                                         |
| Door leaf thickness        | 38 mm                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                         |



*Figure 1 Unexposed side view of the tested hardware* *Figure 2 Exposed side view of the tested hardware*



*Figure 3 Latch edge side view of the tested hardware* *Figure 4 Scar plate preinstallation*



*Figure 5 Hole cutout*

## 4.0 Assessment

Section 4 of AS 1905.1:2015 requires some variations from tested prototypes to be subjected to a pilot scale test for assignment of FRL. As such, in addition to the full-scale tests listed in Table 3, a pilot scale test listed in Table 4 forms the basis of this assessment.

A pilot scale fire resistance test – in accordance with section 2 and Appendix B11 of AS 1530.4:2014 – was done on a pilot scale doorset under the test reference FRT251979. It included a lockset fitted into the door leaf.

AS 1530.4:2014 states that either sustained flaming on the surface of the unexposed face for 10 seconds or longer, ignition of a cotton pad, gap gauge failure or the latching mechanism being disengaged at the end of the test constitute integrity failure. During the test – FRT251979 – the lockset did not initiate failure of the doorset for the duration of the test.

As the proposed lockset did not cause failure in FRT251979, then substituting the proposed hardware for the hardware tested in the referenced doorset reports is not expected to affect their performance.

### 4.1 Variation in doorset

In addition to assessing the McGrath ML Stafford Smart Lock with a dormakaba MS2902 mortice and McGrath Scar Plate, over a redundant 54 mm diameter cylindrical hole on Firecore doorsets tested full scale to AS 1530.4:2005, the locksets are assessed for use in the newer Firecore doorsets tested to AS 1530.4:2014. The test references for both older and newer model doorsets are found in Table 3.

The newer model doorsets have enhanced features – such as integrated intumescent seals - that improve the integrity performance of the doorsets – such as by expanding and sealing gaps around the door leaf/leaves as they develop during fire exposure. This behaviour reduces exposure to surface-mounted hardware and therefore, it is considered more onerous to test on the older doorsets compared to the newer doorsets.

As the proposed hardware is surface mounted and its installation does not require the removal of – or interference with – significant portions of these doorset enhancements, the hardware, when tested on AS 1530.4:2005 doorsets, is expected to achieve equivalent or better performance if tested on AS 1530.4:2014 doorsets. Based on the above, the proposed additional AS 1530.4:2014 doorset applicability is positively assessed.

## 5.0 Conclusion

It is the opinion of Jensen Hughes' accredited fire testing laboratory in Australia that the proposed doorsets are expected to achieve the FRLs shown in Table 6 if fitted with the listed hardware.

This assessment report has been prepared in accordance with section 4.5 of AS 1905.1:2015 and is conditional on the operational characteristics and materials of the doorset complying with section 2 of AS 1905.1:2015. The field of application for the lockset is the same as the field of application for the doorset that the lockset is installed on.

*Table 6 Conclusion*

| Reference test and standard                                      | Description                                                                                                  | Assessed hardware                                                                                                                             | FRL*     |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------|
| FSV 1382a<br>to<br>AS 1530.4:2005                                | Single leaf TVC30<br>core Firecore<br>doorset, nominally<br>38 mm thick.                                     | McGrath ML Stafford Smart Lock with a dormakaba<br>MS2902 mortice and McGrath Scar Plate, over a<br>redundant 54 mm diameter cylindrical hole | -/120/30 |
| FSV 1418a<br>to<br>AS 1530.4:2005                                | Single leaf TVC40<br>core Firecore<br>doorset, nominally<br>48 mm thick.                                     |                                                                                                                                               | -/120/30 |
| FSV 1391a<br>to<br>AS 1530.4:2005                                | Double leaf TVC40<br>core Firecore<br>doorset, nominally<br>48 mm thick.                                     |                                                                                                                                               | -/120/30 |
| FSV 2133<br>to<br>AS 1530.4:2014                                 | Single leaf TVC30<br>core Firecore<br>doorset, nominally<br>37 mm thick.                                     |                                                                                                                                               | -/60/30  |
| FSV 1954<br>to<br>AS 1530.4:2014                                 | Single leaf TVC40<br>core Firecore<br>doorset, nominally<br>47 mm thick.                                     |                                                                                                                                               | -/120/30 |
| FSV 1928<br>to<br>AS 1530.4:2014                                 | Double leaf TVC40<br>core Firecore<br>doorset, nominally<br>47 mm thick –<br>opening towards fire<br>source. |                                                                                                                                               | -/120/30 |
| *FRL is only valid for the standard used for the reference test. |                                                                                                              |                                                                                                                                               |          |

## Conditions and validity

- + The conclusions of this assessment may be used to directly assess the fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.
- + Because of the nature of fire resistance testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy of the result. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.
- + The assessment can therefore only relate to the actual prototype test specimens, testing conditions and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.
- + This assessment is based on information and experience available at the time of preparing this report. The published procedures for the conduct of tests and the assessment of the test results are the subject of constant review and improvement and it is recommended that this report be reviewed by Jensen Hughes before the end of the validity date.
- + The information in this report must not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in this report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.
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## Quality management

| Revision | Date                     | Revision description                                                                |                                                                                     |                                                                                       |
|----------|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| DHAR1.0  | Issue: 02 Sep 2025       | Initial issue.                                                                      |                                                                                     |                                                                                       |
|          | Expiry date: 02 Sep 2030 | <b>Prepared</b>                                                                     | <b>Reviewed</b>                                                                     | <b>Authorised</b>                                                                     |
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