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**DHAR Test Assessment No. DHAR 50379100a.2 Page 1 of 5**

Test Sponsors	Issue Date
Digital Door Locks L27, 101 Collins Street Melbourne VIC 3000 and Firecore Pty Limited 291 Warringah Road Beacon Hill NSW 2100	02/03/2018
	Validity Date
	30/11/2022

**The Fire Resistance Performance of TVC30 Core Firecore Doorsets with the nominated variation to the Door lockset**

This report supersedes Report No. DHAR 50379100a.1

**Variations Considered in this Report**

Fitting a Samsung SHP-DP728 Digital Door Lock (Mortice), Samsung SHP-DP727 Digital Door Lock (Mortice), Samsung SHS-P718 Digital Door Lock (Mortice), Samsung SHS-P717 Digital Door Lock (Mortice) in different colour variations into the door leaf in lieu of the door lockset tested in the referenced tests.



SHP-DP728

SHP-DP727

SHS-P718

SHS-P717

All

Front (External)Face

Back (Internal) Face


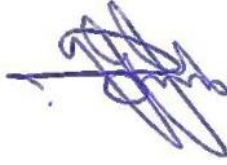
**Referenced Test Reports**

Test Report	Doorset Description	Test Standard
FSV 1382a	Single Leaf TVC30 Core Firecore Doorset nominally 38mm thick	AS 1530.4-2005
FSV 1418a	Single Leaf TVC40 Core Firecore Doorset nominally 48mm thick	AS 1530.4-2005
FSV 1391a	Double Leaf TVC40 Core Firecore Doorset nominally 48mm thick	AS 1530.4-2005





**Additional Supporting Data**

Test Reference	Doorset Description	Test Duration	Test Standard
EWFA 50154200	Single Leaf TVC30 Core Firecore Doorset nominally 38 mm thick	61 minutes	AS 1530.4-2014

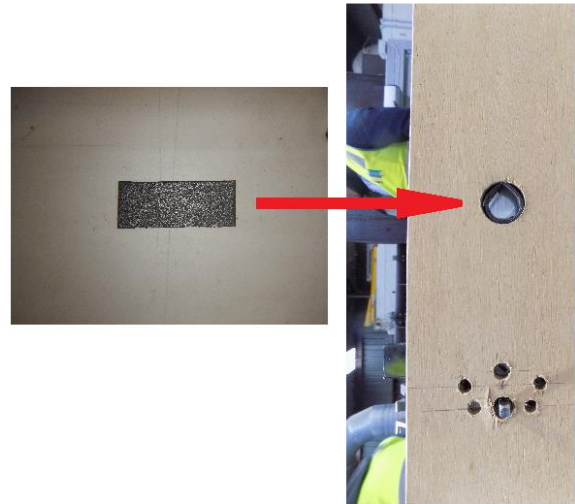
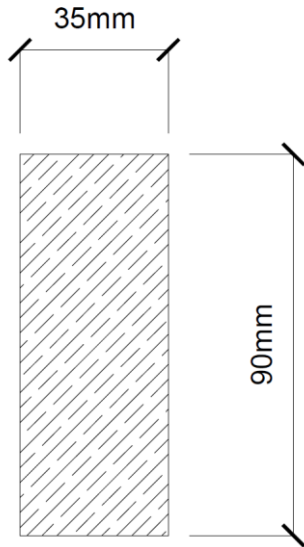
A pilot scale fire resistance test in accordance with Appendix B11 of AS 1530.4-2014 was conducted on a pilot doorset on the 11 August 2017. It included a Samsung SHP-DP728 Digital Door Lock (Mortice) fitted into the door leaf.

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<b>Authorisation</b>	Prepared By:	Reviewed By:
		
	Anthony Rosamilia	Omar Saad

**Tested Hardware Description**

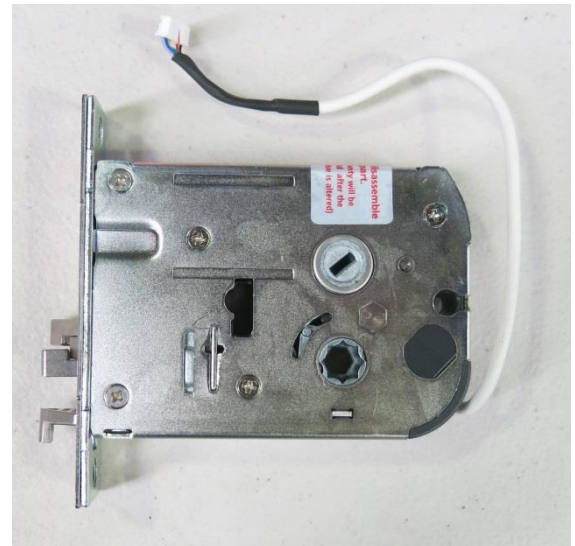
	
Unexposed side	Exposed side
	
Latch Edge	Strike Plate

Tested Hardware Description - Continued



Intumescent Strip

Placement of Intumescent Strip in Door



Modified Internal of the Door Leaf – Extra core section removal shown in Red.

Mortice Lock

**Product name:** Samsung SHP-DP728 Digital Door Lock (Mortice)

**Door system properties:**

**Door leaf thickness:** 38mm

**Backset :** 70mm

**Lockset type:** Mortice Lock

**Location:** Nominal 360mm from the top of the lock to the top of the door leaf

**Cut-out size for lockset:** To fit mortice lock, with the additional removal of 4mm deep section of core, removed by chisel, within the lock reinforcement plate. The removal is to allow the electronic cable for the mortice lock to slip out.

**Function verification:**

**Opening force:** 0.49N

**Closing force:** 0.49N

**Latching force:** 16.7N

**50 opening and closing cycle:** Completed prior to test

**Average door gap clearance:** Top edge: 1.5mm  
Latch edge: 1.4mm  
Hinge edge: 2.6mm

### Discussion

It is expected that if the proposed Samsung SHP-DP728 Digital Door Lock (Mortice) does not initiate failure of the pilot doorset before failure occurred on the referenced doorsets, then substituting the lockset in the referenced test with the proposed lockset will not be detrimental to the performance of the referenced doorsets.

AS 1530.4-2014 states that sustained flaming on the surface of the unexposed face for 10 seconds or longer constitutes integrity failure. AS 1530.4-2014 also states that a latching mechanism ceasing to be engaged constitutes integrity failure. During the referenced test EWFA 50154200 the Samsung SHP-DP728 Digital Door Lock (Mortice) did not initiate failure of the doorset for the duration of the test.

Results from pilot scale test EWFA 50154200 show that the Samsung SHP-DP728 Digital Door Lock (Mortice) is positively assessed for the test periods as indicated below.

#### SHP-DP727, SHS-P718 and SHS-P717 Digital Locksets

It has been confirmed by the report sponsor that the SHP-DP727, SHS-P718 and SHS-P717 Digital Locksets are manufactured from the same materials, have the same operating mechanism design and similar construction as the SHP-DP728 Digital Lockset.

AS1530.4-2014 Clauses 7.9.7 (i) and (j) stipulate:

(i) Changes may be made in the operating characteristics of latchset or lockset hardware, provided the changes do not require modification of the door leaf or door frame and changes to the functions of latchsets involving the operating mechanism.

(j) Changes may be made to the materials of the essential latching components, provided the melting point of any part is the same or higher.

The manufacturer\supplier of the SHP-DP727, SHS-P718 and SHS-P717 Digital Locksets has confirmed in writing that in comparison to the SHP-DP728 Digital Lockset:

- The changes made to the lockset do not require modification to the door leaf or frame nor do they change the function of the latch operating mechanism.
- The materials remain otherwise as tested or of higher melting point.

AS1530.4-2014, clause 7.9.7 (l) states: **Where locksets or latchsets are operated by a steel shaft, their surface-mounted furniture may be varied provided—**

**(i) the melting point of any part is not reduced;** the material used in all the various locksets mentioned in Table 1 are the same.

**(ii) any replacement handle or knob is not so massive or asymmetrical as to introduce a turning moment about the operating shaft which exceeds 0.07 Nm.** The push-pull levers do not invoke a moment

**(iii) any replacement lever handle is not so massive or asymmetrical as to increase the turning moment about the operating shaft by more than 10%;**

The push-pull levers do not invoke a moment

**(iv) any replacement escutcheon plate adequately covers any hole in the door leaf formed to accommodate the lockset or latchset, but does not increase the area of the face of the door leaf covered by the escutcheon by more than 20%.**

The tested lockset's escutcheon covers the greatest area of door leaf out of the proposed locksets.

#### Change in colour of the locksets

The manufacturer\supplier of the locksets has confirmed that the paint is less than 0.5mm thick.

AS1530.4-2014 Clauses 7.9.7 (a) stipulates:

**Variations may be made in electroplated or other metallic finishes and in powder Coats and non-nitrocellulose paint finishes not greater than 0.5 mm thick.**

Based on the above and in absence of any foreseeable detrimental effects, it is considered that the proposed latchsets will achieve an integrity performance on the target doorset listed below.

### Conclusions

On the basis of the above discussion, it is the opinion of this laboratory that the doorsets listed below will achieve the FRL listed below if they are fitted with a Samsung SHP-DP728 Digital Door Lock (Mortice) on the doorsets as described in this assessment report.

This assessment has been prepared in accordance with Section 4.5 of AS 1905.1-2015 and is conditional upon the operational characteristics and materials of the doorset complying with Section 2 of AS 1905.1-2015. The field of application of the door lockset is defined by the field of application of the doorset the door lockset is installed upon.

Test Ref	Description	FRL
FSV 1382a	Single Leaf TVC30 Core Firecore Doorset nominally 38mm thick	-/60/30
FSV 1418a	Single Leaf TVC40 Core Firecore Doorset nominally 48mm thick	-/60/30
FSV 1391a	Double Leaf TVC40 Core Firecore Doorset nominally 48mm thick	-/60/30

### Conditions/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. 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 only 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 preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that this report be reviewed by the validity date by Exova Warringtonfire Aus Pty. Ltd.

The information contained in this report shall 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.