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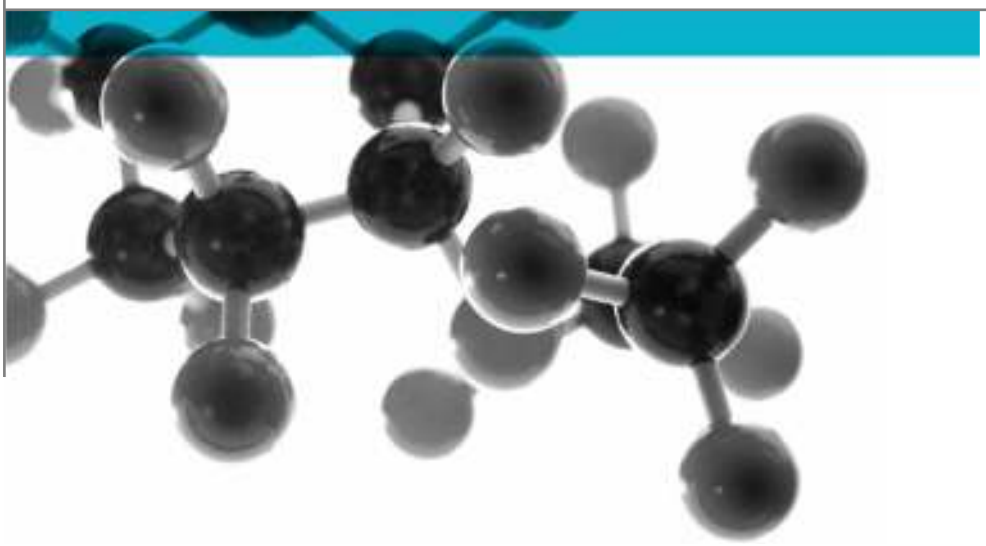
BSEN 12209:2003



TESTS OF MECHANICALLY OPERATED LOCKS AND STRIKE PLATES

A Report To: Ningbo Micota Locks Co

Document Reference: WIL 329386/7

Date: 23.09.13

Copy: Draft

Issue No.: 1

Testing
Advising
Assuring

UKAS TESTING
0621

TEST CONCLUSIONS

Samples of:
Product: Super Euro/Oval Mortice Sashlock
Manufactured by Micota
Model S-E/O
Sizes 64mm & 76mm
have been tested in accordance with:
BS EN 12209:Dec 2003 (Building Hardware – Locks and Latches)
By Exova Warringtonfire a UKAS accredited Testing Laboratory (No. 0621).
At Key Industrial Park, Fernside Rd, Willenhall, West Midlands, WV13 3YA
Results and comments as detailed below:

Clause No.	Description	Compliance
5.1.1	**Dangerous substances**	**Yes**
5.1.2	**Return force of latchbolt**	**Yes**
5.2	**Category of Use - Grade 3**	**Yes**
5.2.1	Resistance to Side Load - Grade 3	Yes
5.2.2	Torque to operate Deadbolt	Yes
5.2.3	Strength of Normal Latch Action and Stops – Grade 3	Yes
5.2.4	Torque resistance of Rim lock with Lockable Handle	N/a
5.3	**Durability - Grade S**	**Yes**
5.3.1	Durability of Latch Action – Grade S	Yes
5.3.2	Durability of deadbolt mechanism - Grade S	Yes
5.3.3	Durability of Locking Snib Mechanism - Grade	N/a
5.4	**Door mass and Closing Force - Grade 8**	**Yes**
5.4.2	**Closing Force**	**Yes**
5.5	**Suitability for use on fire/smoke doors**	**Yes**
5.7.1	**Corrosion Resistance – Grade F**	**Yes**
5.7.2	**Operation at extremes of temperature**	**Yes**
5.8	**Security – Grade 2**	**Yes**
5.8.1.1	Torque resistance of knob/lever on bored lock - Grade	N/a
5.8.1.2	Torque resistance of knob/lever on night latch - Grade	N/a
5.8.2.1	Resistance to side load on deadbolt - Grade 6	Yes
5.8.2.2	Resistance to Drilling and Side Load – Grade	N/a
5.8.3	Deadbolt Projection – Grade 6	Yes
5.8.4.1	Resistance to End Load on deadbolt – Grade 2	Yes
5.8.4.2	Resistance to drilling and end load on deadbolt – Grade	N/a
5.8.5	Resistance to pulling of hook/claw bolt - Grade	N/a
5.8.6	Resistance to disengaging of hook/claw bolt - Grade	N/a
5.8.7	Resistance to forcing of locating device in sliding door lock-Grade	N/a
5.8.8	Resistance to pulling off knob on bored lock/latch-Grade	N/a

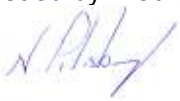
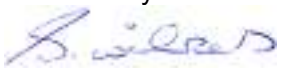
TEST CONCLUSIONS CONTINUED

Clause No.	Description	Compliance
5.8.9.1	Resistance to end load on box locking plate - Grade	N/a
5.8.9.2	Resistance to side load on locking plate – Grade 2	Yes
5.8.9.3	Resistance to pulling on locking plate- Grade	N/a
5.8.9.4	Resistance to lifting force on locking plate- Grade	N/a
5.9	**Field of Door Application - Grade B**	**Yes**
5.9.2	Protection against removal from door	Yes
5.10	**Type of Key Operation and Locking - Grade A**	**Yes**
5.10.1	Strength of key	N/a
5.10.2.1	Manual Locking	Yes
5.10.2.2	Automatic locking deadbolt	N/a
5.10.2.3	Automatic locking latchbolt	N/a
5.10.2.4	Torque to withdraw the latchbolt with key	N/a
5.10.3	**Type of Spindle Operation – Grade 2**	**Yes**
5.11	Torque to withdraw the latchbolt-Grade 2	Yes
5.11.1	Strength of bolt actions	Yes
5.11.2	Minimum follower restoring torque-Grade 2	Yes
5.11.3	**Key Identification Requirements – Grade 0**	**Yes**
5.12	Detaining elements - Grade	N/a
5.12.1	Effective differs - Grade	N/a
5.12.2	Differing step heights on key - Grade	N/a
5.12.3	Non-interpassing of keys with just one interval differ-Grade	N/a
5.12.4	Coding protection - Grade	N/a
7	**Marking**	**Yes**

No inferences can be made regarding performance against other requirements of this standard

NOTE.
These tests are covered by the Laboratory UKAS accreditation schedule.
Tests marked " NA" are not applicable to the type of device under test.
Tests marked "NT" were not applied to the device under test

AUTHORISATION

Tests performed by: Nathan Pilsbury – Senior Test Engineer
Report issued by: Nathan Pilsbury – Senior Test Engineer Signed    Date 22.09.13 For and on behalf of Exova Warringtonfire
Report authorised by: Steve Wilkes – Deputy Manager Signed    Date 22.09.13 For and on behalf of Exova Warringtonfire
Report issued: 22.09.13

UKAS TESTING
0621

NOTE.
Tests marked "Not UKAS Accredited" are not covered by the Laboratory UKAS accreditation schedule.

Tests marked NT were not tested

Tests marked NA are not applicable to the product on test.

The laboratory has tested the products supplied by the client as sampled in accordance with their own requirements

Exova Warringtonfire is an EC Notified Body Number 1104

CONTENTS

TEST DETAILS

CLIENT DETAILS	
Company name	Ningbo Micota Locks Co
Address	Zhuang Qiao Ningbo PR China PC: 315032
Contact	Mr JL Peng
ORDER DETAILS	
Order number	Pro-forma
Dated	28.05.13
SAMPLE DETAILS	
Product	Mortice Sashlock
Model	S-E/O Super Sashlock
Markings	Micota
Manufacturer	Ningbo Micota
Date of Manufacture	Unknown
Other information	None
TEST DETAILS	
Test reference nos.	329386
Date sample received	07.06.13
Date test started	07.06.13
Date test completed	21.06.13
Specification tests conducted to	BS EN 12209:2003 Building hardware - Locks and latches - Mechanically operated locks, latches and locking plates
Class and or Category	None
Special Test requirements	None
Other reports to be used in conjunction with this report	321085, 322669, 329386 &

TEST RESULTS

Lock Sample A

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.7.2	6.7.2	**Operation at Extremes of Temperature** Lock heated to +80°C Torque to operate deadbolt via key< 2Nm Torque to operate Latchbolt Grade < Nm Latchbolt returns to fully thrown position Lock cooled to -20°C Torque to operate deadbolt via key < 2Nm Torque to operate Latchbolt Grade < Nm Latchbolt returns to fully thrown position	 80°C <0.3Nm 1.4Nm Yes -20°C <0.3Nm 1.5Nm Yes	Pass
5.12.4	6.12.4	**Non-interpassing of Keys with just one interval Differ(Grade A,B,C,D only)** Lock should not operate when torque of 2.5Nm applied to next closest key.	Does not operate	Pass
5.3.2	6.3.2	**Durability of Deadbolt Mechanism** Number of cycles completed Grade A, F 10,000, Grade B, G, L, R, W 25,000 Grade C, H, M, S, X 50,000 Torque to operate deadbolt via key < 1.5Nm Torque to operate deadbolt via handle< 3Nm	 50,000 cycles <0.3Nm N/a	Pass
5.12.4	6.12.4	**Non-interpassing of Keys with just one interval Differ (Grade E,F,G,H only)** Lock should not operate when torque of 2.5Nm applied to next closest key.	Does not operate	Pass
5.8.2.1	6.8.2.1	**Resistance to Side Load on deadbolt** Side load applied to Deadbolt for 60s Grade 1 1KN , Grade 2 3KN, Grade 3 5KN, Grade 4 7KN and Grade 6 10KN Deadbolt resisted side load	10KN applied for 1 minute	Pass
5.8.2.2	6.8.2.2	**Resistance to Drilling and Side Load on Deadbolt** Deadbolt drilled adjacent to forend for Grade 5 3min Grade 7 5min Side load applied to Deadbolt for 60s Grade 5 7KN and Grade 7 10KN Deadbolt resisted side load	N/a	N/a

Lock Sample H

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.7.2	6.7.2	**Operation at Extremes of Temperature** Lock heated to +80°C Torque to operate deadbolt via key< 2Nm Torque to operate Latchbolt Grade < Nm Latchbolt returns to fully thrown position Lock cooled to -20°C Torque to operate deadbolt via key < 2Nm Torque to operate Latchbolt Grade < Nm Latchbolt returns to fully thrown position	80°C <0.3Nm 1.4Nm Yes -20°C <0.3Nm 1.5Nm Yes	Pass
5.12.4	6.12.4	**Non-interpassing of Keys with just one interval Differ(Grade A,B,C,D only)** Lock should not operate when torque of 2.5Nm applied to next closest key.	Does not operate	Pass
5.3.2	6.3.2	**Durability of Deadbolt Mechanism** Number of cycles completed Grade A, F 10,000, Grade B,G,L,R,W 25,000 Grade C, H, M, S, X 50,000 Torque to operate deadbolt via key < 1.5Nm Torque to operate deadbolt via handle< 3Nm	50,000 cycles <0.3Nm N/a	Pass
5.12.4	6.12.4	**Non-interpassing of Keys with just one interval Differ (Grade E,F,G,H only)** Lock should not operate when torque of 2.5Nm applied to next closest key.	Does not operate	Pass
5.8.2.1	6.8.2.1	**Resistance to Side Load on deadbolt** Side load applied to Deadbolt for 60s Grade 1 1KN, Grade 2 3KN, Grade 3 5KN, Grade 4 7KN and Grade 6 10KN Deadbolt resisted side load	10KN applied for 1 minute	Pass
5.8.2.2	6.8.2.2	**Resistance to Drilling and Side Load on Deadbolt** Deadbolt drilled adjacent to forend for Grade 5 3min Grade 7 5min Side load applied to Deadbolt for 60s Grade 5 7KN and Grade 7 10KN Deadbolt resisted side load	N/a	N/a

Lock Sample B

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.9.2	6.9.2	**Protection against Dismantling** Lock should not be able to be removed when door closed, using the specified tools from the outside of the door and from the inside on grades K to T	Cannot be removed	Pass
5.2.2	6.2.2	**Torque to operate Deadbolt** Applied via key should be less than 1.5Nm Applied via handle should be less than 3Nm	<0.3Nm N/a	Pass
5.2.4	6.2.4	**Torque resistance of Rim lock with lockable handle/knob** Apply torque of 0.4 x radius of handle Lock continues to function correctly	N/a	N/a
5.8.1.2	6.8.1.2	**Torque resistance of knob or handle of rim night latches** Apply torque of 1.0 x radius of handle Lock should not open	N/a	N/a
5.10.1	6.10.1	**Strength of Key** The key should resist a torque of 2.5Nm Torque to operate deadbolt with key <1.5Nm Torque to operate latchbolt with key <1.5Nm	N/a	N/a

Lock Sample J

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.9.2	6.9.2	**Protection against Dismantling** Lock should not be able to be removed when door closed, using the specified tools from the outside of the door and from the inside on grades K to T	Cannot be removed	Pass
5.2.2	6.2.2	**Torque to operate Deadbolt** Applied via key should be less than 1.5Nm Applied via handle should be less than 3Nm	<0.3Nm N/a	Pass
5.2.4	6.2.4	**Torque resistance of Rim lock with lockable handle/knob** Apply torque of 0.4 x radius of handle Lock continues to function correctly	N/a	N/a
5.8.1.2	6.8.1.2	**Torque resistance of knob or handle of rim night latches** Apply torque of 1.0 x radius of handle Lock should not open	N/a	N/a
5.10.1	6.10.1	**Strength of Key** The key should resist a torque of 2.5Nm Torque to operate deadbolt with key <1.5Nm Torque to operate latchbolt with key <1.5Nm	N/a	N/a

Lock Sample C

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.10.2.1	6.10.2.1	**Deadlocking Mechanism** Deadlocking should be possible with an end load of 15N applied to deadbolt. The key should not be removable unless in fully thrown/withdrawn position or an indicator should show that the lock is not fully secured	15N applied Deadlocked Key not removable	Pass
5.10.2.2	6.10.2.2	**Manual locking with multiple turns** Deadlocking should be possible in each position with an end load of 15N applied to deadbolt. The key should not be removable unless lock properly detained.	N/a	N/a
5.10.2.3	6.10.2.3	**Automatically locking deadbolt** Deadbolt should release automatically when closed by a 50N force from 5°. Deadbolt should retract fully before latchbolt disengages from locking plate	N/a	N/a
5.10.2.4	6.10.2.4	**Automatically locking latchbolt** latchbolt should release automatically when closed by a 50N force from 5°. Not possible to manipulate deadlocking	N/a	N/a
5.8.3	6.8.3	**Deadbolt projection** When fully thrown and detained deadbolt should have a projection of at least the following Grade 1 10mm , Grade 2 12mm , Grade 3 14mm , Grade 4,5,6 & 7 20mm	20.05mm	Pass
5.2.3	6.2.3	**Strength of normal latch action and stops** Torque applied to latch follower in both directions Grade 1 20Nm, Grade 2 40Nm, Grade 3 60Nm Torque to operate latchbolt Grade 3 <5Nm	60Nm applied 1.7Nm	Pass
5.8.4.1	6.8.4.1	**Resistance to End Load on deadbolt** End load applied to Deadbolt for 60s Grade 1 1KN , Grade 2 2KN, Grade 3 4KN, Grade 4 5KN and Grade 6 6KN Resulting projection not less than Grade 1 8mm, Grade 2 10mm, Grade 3 11mm, Grade 4 & 6 17mm	2KN applied for 1 minute 14.17mm	Pass
5.8.4.2	6.8.4.2	**Resistance to Drilling and End Load** Lock drilled in an attempt to remove stops Grade 5 3min Grade 7 5min End load applied to Deadbolt for 60s Grade 5 5KN and Grade 7 6KN Resulting projection not less than Grade 5 & 7 17mm	N/a	N/a

Lock Sample K

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.10.2.1	6.10.2.1	**Deadlocking Mechanism** Deadlocking should be possible with an end load of 15N applied to deadbolt. The key should not be removable unless in fully thrown/withdrawn position or an indicator should show that the lock is not fully secured	15N applied Deadlocked Key not removable	Pass
5.10.2.2	6.10.2.2	**Manual locking with multiple turns** Deadlocking should be possible in each position with an end load of 15N applied to deadbolt. The key should not be removable unless lock properly detained.	N/a	N/a
5.10.2.3	6.10.2.3	**Automatically locking deadbolt** Deadbolt should release automatically when closed by a 50N force from 5°. Deadbolt should retract fully before latchbolt disengages from locking plate	N/a	N/a
5.10.2.4	6.10.2.4	**Automatically locking latchbolt** latchbolt should release automatically when closed by a 50N force from 5°. Not possible to manipulate deadlocking	N/a	N/a
5.8.3	6.8.3	**Deadbolt projection** When fully thrown and detained deadbolt should have a projection of at least the following Grade 1 10mm , Grade 2 12mm , Grade 3 14mm , Grade 4,5,6 & 7 20mm	20.11mm	Pass
5.2.3	6.2.3	**Strength of normal latch action and stops** Torque applied to latch follower in both directions Grade 1 20Nm, Grade 2 40Nm, Grade 3 60Nm Torque to operate latchbolt Grade 3 <5Nm	60Nm applied 1.9Nm	Pass
5.8.4.1	6.8.4.1	**Resistance to End Load on deadbolt** End load applied to Deadbolt for 60s Grade 1 1KN , Grade 2 2KN, Grade 3 4KN, Grade 4 5KN and Grade 6 6KN Resulting projection not less than Grade 1 8mm, Grade 2 10mm, Grade 3 11mm, Grade 4 & 6 17mm	2KN applied for 1 minute 14.17mm	Pass
5.8.4.2	6.8.4.2	**Resistance to Drilling and End Load** Lock drilled in an attempt to remove stops Grade 5 3min Grade 7 5min End load applied to Deadbolt for 60s Grade 5 5KN and Grade 7 6KN Resulting projection not less than Grade 5 & 7 17mm	N/a	N/a

Lock Sample D

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.1.2	6.1.2	**Return force of latch bolt** Force on latch bolt when bolt returned to 2mm from the forend. Should be more than 2.5N	6.4N	Pass
5.10.3	6.10.3	**Torque to withdraw the latch bolt with key** The torque to withdraw the latch bolt flush with the forend with should not exceed 1.5Nm	N/a	N/a
5.11.1	6.11.1	**Torque to withdraw latchbolt with handle** Torque to withdraw latchbolt flush with forend via follower Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	1.4Nm	Pass
5.11.3	6.11.3	**Minimum follower restoring torque** Torque on follower when returned 5° from back stop position should not be less than Grade 1 0Nm Grade 2,3,4 0.6Nm	1.1Nm	Pass
5.4.2	6.4.2	**Closing force** Door should close and engage latchbolt into keeper when force applied should be less than 50N for grade 1,2,3, 25N for grade 4,5,6 and 15N for grade 7,8,9	12.23N 12.29N 11.59N	Pass
5.3.1	6.3.1.1	**Durability of latch action without force applied** Grade cycles required Number of cycles completed Door should close and engage latchbolt into keeper when force applied should be less than 50N for grade 1,2,3, 25N for grade 4,5,6 and 15N for grade 7,8,9 Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	N/a	N/a
5.3.1	6.3.1.2	**Durability of latch action with force applied** Grade S, 200,000 cycles required with 50N load on latchbolt Number of cycles completed Door should close and engage latchbolt into keeper when force applied should be less than 50N for grade 1,2,3, 25N for grade 4,5,6 and 15N for grade 7,8,9 Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	200,000 cycles 11.65N 11.71N 11.82N 1.8Nm	Pass

Lock D continued

5.11.3	6.11.3	**Minimum follower restoring torque** Torque on follower when returned 5° from back stop position should not be less than Grade 1 0Nm Grade 2,3,4 0.6Nm	0.8Nm	Pass
5.3.3	6.3.3	**Durability of locking snib mechanism** Number of cycles completed Grade A,F 10,000 Grade B, C, G, H, L, M, R, S, W, X 25,000 Snib mechanism should still work	N/a	N/a
5.2.1	6.2.1	**Resistance to side load on latch** Force applied to securing face of latch bolt 3mm from forend. Force applied should be Grade 1 2KN Grade 2 & 3 3KN Latch operation should continue to work after loading	3KN applied Yes	Pass
5.11.2	6.11.2a	**Strength of bolt action** The deadbolt mechanism Torque applied to deadbolt follower with deadbolt held to prevent more than 3mm movement.Torque applied should be 30Nm The lock should still operate correctly.	N/a	N/a
5.11.2	6.11.2b	**Strength of bolt action** The latchbolt action Torque applied to Latch follower with Latch held to prevent more than 3mm movement. Torque applied should be 20Nm Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	20Nm applied 1.6Nm	Pass

Lock Sample L

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.1.2	6.1.2	**Return force of latch bolt** Force on latch bolt when bolt returned to 2mm from the forend. Should be more than 2.5N	6.4N	Pass
5.10.3	6.10.3	**Torque to withdraw the latch bolt with key** The torque to withdraw the latch bolt flush with the forend with should not exceed 1.5Nm	N/a	N/a
5.11.1	6.11.1	**Torque to withdraw latchbolt with handle** Torque to withdraw latchbolt flush with forend via follower Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	1.7Nm	Pass
5.11.3	6.11.3	**Minimum follower restoring torque** Torque on follower when returned 5° from back stop position should not be less than Grade 1 0Nm Grade 2,3,4 0.6Nm	1.2Nm	Pass
5.4.2	6.4.2	**Closing force** Door should close and engage latchbolt into keeper when force applied should be less than 50N for grade 1,2,3, 25N for grade 4, 5, 6 and 15N for grade 7,8,9	11.91N 11.73N 12.19N	Pass
5.3.1	6.3.1.1	**Durability of latch action without force applied** Grade cycles required Number of cycles completed Door should close and engage latchbolt into keeper when force applied should be less than 50N for grade 1,2,3, 25N for grade 4, 5, 6 and 15N for grade 7, 8, 9 Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	N/a	N/a
5.3.1	6.3.1.2	**Durability of latch action with force applied** Grade S, 200,000 cycles required with 50N load on latchbolt Number of cycles completed Door should close and engage latchbolt into keeper when force applied should be less than 50N for grade 1,2,3, 25N for grade 4, 5, 6 and 15N for grade 7, 8, 9 Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	200,000 cycles 12.23N 11.96N 11.88N 1.6Nm	Pass

Lock L continued

5.11.3	6.11.3	**Minimum follower restoring torque** Torque on follower when returned 5° from back stop position should not be less than Grade 1 0Nm Grade 2,3,4 0.6Nm	1.1Nm	Pass
5.3.3	6.3.3	**Durability of locking snib mechanism** Number of cycles completed Grade A,F 10,000 Grade B,C,G,H,L,M,R,S,W,X 25,000 Snib mechanism should still work	N/a	Pass
5.2.1	6.2.1	**Resistance to side load on latch** Force applied to securing face of latch bolt 3mm from forend. Force applied should be Grade 1 2KN Grade 2 & 3 3KN Latch operation should continue to work after loading	3KN applied Yes	Pass
5.11.2	6.11.2a	**Strength of bolt action** **The deadbolt mechanism** Torque applied to deadbolt follower with deadbolt held to prevent more than 3mm movement. Torque applied should be 30Nm The lock should still operate correctly.	N/a	N/a
5.11.2	6.11.2b	**Strength of bolt action** **The latchbolt action** Torque applied to Latch follower with Latch held to prevent more than 3mm movement. Torque applied should be 20Nm Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification	20Nm applied 1.6Nm	Pass

Lock Sample G

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.7.1	6.7.1	**Corrosion resistance** Lock subjected to salt spray test for Grade A 24hr, Grade B, E 48hr, Grade C, F 96hr, Grade D, G 240hr The lock should be operated 17 times after salt spray and then subjected to the following tests 3 times each to prove satisfactory operation.	96hrs exposure	Pass
5.2.2	6.2.2	**Torque to operate Deadbolt** Applied via key should be less than 1.5Nm Applied via handle should be less than 3Nm Torque to operate should not exceed requirements by more than 20%	1) <0.3Nm 2) <0.3Nm 3) <0.3Nm N/a	Pass
5.11.1	6.11.1	**Torque to withdraw latchbolt with handle** Torque to withdraw latchbolt flush with forend Grade 1 0.5Nm, Grade 2 3Nm, Grade 3 5Nm, Grade 4 Manufacturers specification Torque to operate should not exceed requirements by more than 20%	1) 1.8Nm 2) 1.7Nm 3) 1.7Nm	Pass

Tests for all locking plates

Locking Plate Sample A

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.8.9.2	6.8.9.2	**Resistance to side load on locking plate** Force applied to bolt aperture for 60s + 10s Grade1 1KN, Grade 2 3KN, Grade 3 5KN Grade 4, 5 7KN, Grade 6, 7 10KN Security not compromised	3KN applied for 1 minute	Pass
5.9.2	6.9.2	**Protection against Dismantling** Lock should not be able to be removed when door closed, using the specified tools from the outside of the door and from the inside on grades A, D, K to R	Cannot be removed	Pass

Locking Plate Sample D

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.8.9.2	6.8.9.2	**Resistance to side load on locking plate** Force applied to bolt aperture for 60s + 10s Grade1 1KN, Grade 2 3KN, Grade 3 5KN, Grade 4, 5 7KN, Grade 6,7 10KN Security not compromised	3KN applied for 1 minute	Pass
5.9.2	6.9.2	**Protection against Dismantling** Lock should not be able to be removed when door closed, using the specified tools from the outside of the door and from the inside on grades A, D, K to R	Cannot be removed	Pass

Manufacturers Information

Requirement clause	Test clause	Requirement details	Test result	P = Pass F = Fail
5.12.1	6.12.1	**Detaining elements** The minimum number of detaining elements that form part of the deadbolt mechanism Grade 0 0 Grade A 3 Grade B,C 5 Grade D,E 6 Grade F,G 7 and Grade H 8	N/a	N/a
5.12.2	6.12.2	**Effective differs** The minimum number of effective differs Grade 0 0,Grade A 100,Grade B 1000, Grade C 10,000,Grade D 4,000,Grade E 20,000 Grade F 6,000,Grade G 50,000, Grade H 100,000	N/a	N/a
5.12.3	6.12.3	**Differing step heights on key** Keys shall have the minimum number of different step heights Grade 0 0 Grade A 2 Grade B,C,D,E 3 Grade F,G,H 4	N/a	N/a
5.12.5	6.12.5	**Coding protection** Except for grade A direct coding on the key is not permitted	N/a	N/a

Classification achieved

Lock and latch

Category of use	Durabilty	Door mass	Fire resistance	Safety	Corrosion resistance	Security	Field of door application	Type of key operation & locking	Type of spindle operation	Key identification
3	S	8	1	0	F	2	B	A	2	0

Fire Test Evidence

Requirement clause	Requirement details	Test result	P = Pass F = Fail
5.5	**Suitability for use on fire/smoke doors** The products shall have been subjected to a successful fire test from both sides according to EN 1634-1. The latch shall comply with the requirements of clause 5.1.2	Report No.	Pass
5.1.2	**Return force of latch bolt** Force on latch bolt when bolt returned to 2mm from the forend. Should be more than 2.5N	6.7N	Pass

Marking

Requirement clause	Requirement details	Test result	P = Pass F = Fail
7	**Marking** The literature or the packaging should be marked with the following Manufacturers name or trademark Product model identification Classification Box Number and date of standard	Wriiten confirmation supplied by manufacturer	Pass

Observations and comments

The Micota S-E/O Super Mortice Sashlocks has successfully passed all the relevant clauses tested in accordance to EN 12209:2003.

- End of report -