

Date received: 28/11/16

Date of issue: 10/01/17

Report consists of 8 test reports.

Defects before testing: None

Sample name: Integra click

FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

SAMPLE N° 224514

List performed tests:

1. Vertical static overload test EN 15570/2008, clause 6.2.1
2. Horizontal static overload test EN 15570/2008, clause 6.2.2
3. 1st Vertical static load test EN 15570/2008, clause 6.3.3
4. 1st Horizontal static load test EN 15570/2008, clause 6.3.4
5. Slam shut open test EN 15570/2008, clause 6.3.5
6. Durability test EN 15570/2008, clause 6.3.7
7. 2nd Vertical static load test EN 15570/2008, clause 6.3.9
8. 2nd Horizontal static load test EN 15570/2008, clause 6.3.10



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Managing Director
Dr. Andrea Giavon

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TEST REPORT

224514 / 1

Date received: 28/11/16

Date of test: 02/12/16

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

Vertical static overload test EN 15570/2008, clause 6.2.1

Hinges pivoting on a vertical axis. Vertical static overload test EN 15570/2008, clause 6.2.1

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: nickel
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (first set of hinges)

Test results

| Test level | Vertical load kg | Number of cycles | Remarks |
|------------|------------------|------------------|---------|
| 3 | 30 | 10 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Glevon

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TEST REPORT

224514 / 2

Date received: 28/11/16

Date of test: 02/12/16

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

Horizontal static overload test EN 15570/2008, clause 6.2.2

Hinges pivoting on a vertical axis. Horizontal static overload test EN 15570/2008, clause 6.2.2

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: nickel
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (first set of hinges)

Test results

| Test level | Horizontal force N | Number of cycles | Remarks |
|------------|--------------------|------------------|---------|
| 3 | 80 | 10 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Glavon

TEST REPORT

224514 / 3

Date received: 28/11/16

Date of test: 02/12/16

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

1st Vertical static load test EN 15570/2008, clause 6.3.3

Hinges pivoting on a vertical axis. 1st Vertical static load test EN 15570/2008, clause 6.3.3

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: nickel
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (second set of hinges)

Test results

| Test level | Vertical load kg | Number of cycles | Remarks |
|------------|------------------|------------------|---------|
| 3 | 20 | 10 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Giavon

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TEST REPORT

224514 / 4

Date received: 28/11/16

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Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

1st Horizontal static load test EN 15570/2008, clause 6.3.4

Hinges pivoting on a vertical axis. 1st Horizontal static load test EN 15570/2008, clause 6.3.4

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: nickel
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (second set of hinges)

Test results

| Test level | Horizontal force N | Number of cycles | Remarks |
|------------|--------------------|------------------|---------|
| 3 | 40 | 10 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Giavon

TEST REPORT

224514 / 5

Date received: 28/11/16

Date of test: 02/12/16

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

Slam shut open test EN 15570/2008, clause 6.3.5

Hinges pivoting on a vertical axis. Slam shut open test EN 15570/2008, clause 6.3.5

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: nickel
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (second set of hinges)

Test results:

| Test level | Needed mass to keep the door movement (m1) kg | Test mass (m2) kg | Number of cycles | Remarks |
|------------|---|-------------------|------------------|---------|
| 3 | 0,4 | 4 | 10 | none |

Additional slam closed doors with dampers

| Test level | Needed mass to keep the door movement (m1) kg | Test mass (m3) kg | Number of cycles | Remarks |
|------------|---|-------------------|------------------|---------|
| 3 | 0,4 | 1 | 100 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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TEST REPORT

224514 / 6

Date received: 28/11/16

Date of test: 02/12/16

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

Durability test EN 15570/2008, clause 6.3.7

Hinges pivoting on a vertical axis. Durability test EN 15570/2008, clause 6.3.7

Type of hinge: c
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: nickel
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (second set of hinges)
Width door (W): 600 mm
Maximum allowable door deflection: 3 mm 5‰ di (W)

Test results:

| Test level | Number of cycles | Load on door kg | Closing mechanism force | | Opening force | | Closing force | | Door deflection mm |
|------------|------------------|-----------------|-------------------------|-----------------------|------------------------|----------------------|------------------------|----------------------|--------------------|
| | | | initial (min. 0,5 N) | final (min. 0,5 N) | initial (max. 20 N) | final (max. 20 N) | initial (max. 20 N) | final (max. 20 N) | |
| 3 | 80.000 | 2 | 1,1 | 0,8 | 4,0 | 4,3 | 1,0 | 1,5 | 2 |

Remarks: none

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Giavon

TEST REPORT

224514 / 7

Date received: 28/11/16

Date of test: 02/01/17

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

2nd Vertical static load test EN 15570/2008, clause 6.3.9

Hinges pivoting on a vertical axis. 2nd Vertical static load test EN 15570/2008, clause 6.3.9

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: Ni/Cu/Fe
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (second set of hinges)

Test results

| Test level | Vertical load kg | Number of cycles | Remarks |
|------------|------------------|------------------|---------|
| 3 | 20 | 10 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Giavon

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TEST REPORT

224514 / 8

Date received: 28/11/16

Date of test: 02/01/17

Date of issue: 10/01/17

Sample name: Integra click



FORMENTI & GIOVENZANA S.P.A.
VIA PIAVE 55-C.P. 58
20837 VEDUGGIO CON COLZANO (MB)
ITALIA

2nd Horizontal static load test EN 15570/2008, clause 6.3.10

Hinges pivoting on a vertical axis. 2nd Horizontal static load test EN 15570/2008, clause 6.3.10

Type of hinge: with damper mechanism
Cup diameter: 35 mm
Opening angle: 105°
Declared surface treatment: Ni/Cu/Fe
Type of door used for the test: B
Test door dimensions: 600 x 19 x 700 (height) mm
Number of hinges used for the test: 2 (second set of hinges)

Test results

| Test level | Horizontal force N | Number of cycles | Remarks |
|------------|--------------------|------------------|---------|
| 3 | 40 | 10 | none |

Notes: hinges and plates have been mounted on the particleboard by means of bolts.

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Managing Director
Dr. Andrea Glavon

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LAB N° 1514



Furniture Business Division

TEST REPORT: 4787836221.1**APPLICANT**

Name: Formenti & Giovenzana
Address: Via Concordia 16
Veduggio con Colzano, MB 20837
Italy

Product: Mounting plate 525B01M50210000
- ISO 9227 – 72h (isp. 24h)

**DATE**

Sample in: 23/1/2017
Tests start: 23/1/2017
Tests end: 27/1/2017
Report issue: 2/2/2017

OVERALL DIMENSIONS:

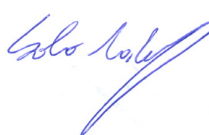
| | | | | |
|----------------------|---------------|-------------------------------|----------------|--------|
| Measured: | Depth: | 30 mm; | Height: | 60 mm; |
| | Width: | 120 mm; | Weight: | 86,2 g |
| Nominal: | Depth: | ND; | Height: | ND; |
| | Width: | ND; | Weight: | ND; |
| Sample number | 757027 | Order number: 11614589 | | |

REFERENCE STANDARD

EN ISO 9227: 2012 Corrosion tests in artificial atmospheres - Salt spray tests.

Sample defects before the test: NO VISIBLE DEFECTS

Technician
Rodolfo Sala


Digitally signed
by Rodolfo Sala
Date:
2017.02.02
12:18:09 +01'00'

Laboratory Manager
Deputy Giancarlo Busato



Digitally signed by
Giancarlo Busato
Date: 2017.02.02
12:28:27 +01'00'

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The test results listed in this report are relevant only for the tested sample. Sampling performed by the customer.*



LAB N° 1514



Furniture Business Division

TEST REPORT: 4787836221.1

Issued on: 2/2/2017

NSS test - Corrosion test UNI EN ISO 9227:20012 Par. 3.2.2

TEST CONDITIONS / EQUIPMENT USED

- Test equipment: **Weiss Mod SC1000**
- Sodium chlorite: **Sigma Aldrich cod. 71380– lotto SZBF2750V**
- Type of water: **Distilled**
- Dimensions and shape of the test specimen: **See above**
- Cleaning treatment applied before test: **Soaked cloth with deionized water**
- Protection given to edges or other special areas on sample under test: **Not required**
- Cleaning treatment applied after test: **with deionized current water**
- Loss in mass resulting from the cleaning operation: **Not required**
- Number of sample: **4**
- The angle at which the tested surfaces were inclined: **20 ± 5° (angle along the longest the dimension)**
- Frequency of specimen location permutations: **Not required**
- Total number of specimen location permutations during test: **Not required**
- Check with steel reference: **Not required**
- Loss of steel reference is equal to: **Not required**
- Test temperature: **35 ± 2°C**
- pH of the test solution: **from 6 to 7**
- pH of the collected solution: **from 6,5 to 7,2**
- Total amount of the collected solution: **115,85 mg**
- Average collection rate on the spray cabinet: **from 1 to 2 ml/h (1,609 ml/h)**
- Salt concentration in the solution collected during the test: **53,2 g/l (limits:50 g/l ±5g/l)**
- Interval of inspection: **24 hours**
- Any abnormality or incident occurring during the entire test procedure: **No anomaly**

TIME OF EXPOSURE REQUIRED:

- 72 hours

TIME OF EXPOSURE:

- 72 hours

TEST REPORT: 4787836221.1
Issued on: 2/2/2017

Result of the periodical checks of sample under test:

| Number of controls tested sample | Time of exposure (hours) | Observations |
|----------------------------------|--------------------------|--------------|
| First control | 24 | No defect |
| Second control | 48 | No defect |
| Third control | 72 | No defect |

Note:
PHOTOGRAPHIC DOCUMENTATION

Samples before test :



TEST REPORT: 4787836221.1

Issued on: 2/2/2017

After 72 hours:



Legend:

ND = NOT DECLARED.

END OF TEST REPORT



LAB N° 1514

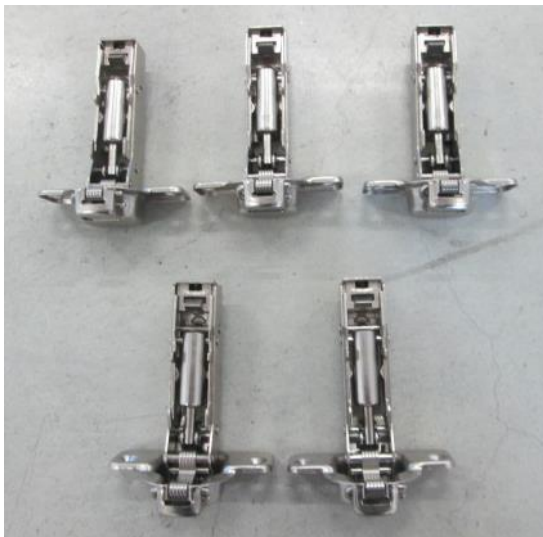


Furniture Business Division

TEST REPORT: 4787836172.1**APPLICANT**

Name: Formenti & Giovenzana
Address: Via Concordia 16
Veduggio con Colzano, MB 20837
Italy

Product: Integra click-on hinge
51BSH5050005000 - ISO 9227 –
72h (isp. 24h)

**DATE**

Sample in: 23/1/2017
Tests start: 23/1/2017
Tests end: 27/1/2017
Report issue: 2/2/2017

OVERALL DIMENSIONS:

| | | | | |
|----------------------|---------------|-------------------------------|----------------|--------|
| Measured: | Depth: | 30 mm; | Height: | 60 mm; |
| | Width: | 120 mm; | Weight: | 86,2 g |
| Nominal: | Depth: | ND; | Height: | ND; |
| | Width: | ND; | Weight: | ND; |
| Sample number | 757017 | Order number: 11614252 | | |

REFERENCE STANDARD

EN ISO 9227: 2012 Corrosion tests in artificial atmospheres - Salt spray tests.

Sample defects before the test: NO VISIBLE DEFECTS

Technician
Rodolfo Sala

Digitally signed
by Rodolfo Sala
Date: 2017.02.02
12:16:54 +01'00'

Laboratory Manager
Deputy Giancarlo Busato

Digitally signed by
Giancarlo Busato
Date: 2017.02.02
12:28:05 +01'00'

*Note: any copy, even partial, of this report, and any change or alteration to it are strictly forbidden.
The test results listed in this report are relevant only for the tested sample. Sampling performed by the customer.*



LAB N° 1514



Furniture Business Division

TEST REPORT: 4787836172.1

Issued on: 2/2/2017

NSS test - Corrosion test UNI EN ISO 9227:20012 Par. 3.2.2

TEST CONDITIONS / EQUIPMENT USED

- Test equipment: **Weiss Mod SC1000**
- Sodium chlorite: **Sigma Aldrich cod. 71380– lotto SZBF2750V**
- Type of water: **Distilled**
- Dimensions and shape of the test specimen: **See above**
- Cleaning treatment applied before test: **Soaked cloth with deionized water**
- Protection given to edges or other special areas on sample under test: **Not required**
- Cleaning treatment applied after test: **with deionized current water**
- Loss in mass resulting from the cleaning operation: **Not required**
- Number of sample: **4**
- The angle at which the tested surfaces were inclined: **20 ± 5° (angle along the longest the dimension)**
- Frequency of specimen location permutations: **Not required**
- Total number of specimen location permutations during test: **Not required**
- Check with steel reference: **Not required**
- Loss of steel reference is equal to: **Not required**
- Test temperature: **35 ± 2°C**
- pH of the test solution: **from 6 to 7**
- pH of the collected solution: **from 6,5 to 7,2**
- Total amount of the collected solution: **115,85 mg**
- Average collection rate on the spray cabinet: **from 1 to 2 ml/h (1,609 ml/h)**
- Salt concentration in the solution collected during the test: **53,2 g/l (limits:50 g/l ±5g/l)**
- Interval of inspection: **24 hours**
- Any abnormality or incident occurring during the entire test procedure: **No anomaly**

TIME OF EXPOSURE REQUIRED:

- **72 hours**

TIME OF EXPOSURE:

- **72 hours**

TEST REPORT: 4787836172.1
Issued on: 2/2/2017

Result of the periodical checks of sample under test:

| Number of controls tested sample | Time of exposure (hours) | Observations |
|----------------------------------|--------------------------|--------------|
| First control | 24 | No defect |
| Second control | 48 | No defect |
| Third control | 72 | No defect |

Note:
PHOTOGRAPHIC DOCUMENTATION

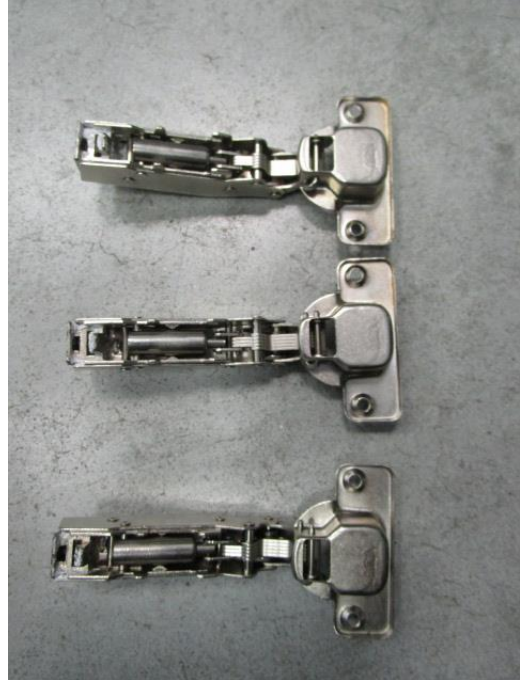
Samples before test :



TEST REPORT: 4787836172.1

Issued on: 2/2/2017

After 72 hours:



Legend:

ND = NOT DECLARED.

END OF TEST REPORT