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Maco Manufacturing Inc.
Date: 10/17/14

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Test Report For:

Maco Manufacturing Inc.

**SEFA 8W – 2010 RECOMMENDED TESTING
STANDARDS FOR WOOD
LABORATORY CASEWORK**

**Single Drawer/Double Door Base Cabinet,
Science Table with H Rails, and Wall Cabinet**

Andrew Barber
Reviewer

James Jantz
Senior Project Engineer

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DATE RECEIVED: March 10, 2014
DATES TESTED: March 12-October 2, 2014
Sample Condition: Production

DESCRIPTION OF SAMPLES:

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood
65125-36H	Science Table with H Rails	36"H x 60"L x 30"W with 2 1/4" Solid Lumber legs, 3/4" solid lumber aprons and rails, 4 steel corner braces
603-48S	Wall Cabinet	48"W x 12"D x 30"H with 2-1" thick Veneer Plywood adjustable shelves, 1/4" hardwood back, RPC374-26D Door Hinges, all other parts 3/4" hardwood veneer core plywood

WORK REQUESTED/APPLICABLE DOCUMENTS:

To test the submitted samples per the SEFA 8W – 2010 Laboratory Furniture Standard for the following tests:

Test No.	Test Description
4.2	Cabinet Load Test
4.3	Cabinet Concentrated Load Test
4.4	Cabinet Torsion Test
4.5	Cabinet Submersion Test
5.1	Door Hinge Test
5.2	Cabinet Door Impact Test
5.3	Cabinet Door Cycle Test
6.1	Drawer Static Load Test
6.3	Drawer Impact Test
6.4	Drawer Internal Impact Test
6.5	Drawer Cycle Test
7.1	Shelf Load Test
8.1	Chemical Spot Test
8.2	Hot Water Test
9.2	Wall Mounted Cabinet Load Test
10.2	Table Static Load
10.3	Table Racking

CONCLUSION:

The submitted samples meet the acceptance criteria of the testing outlined above.

TEST EQUIPMENT USED:

Asset	Description	Manufacturer	Cal Date	Cal Due
138012	SCALE / 0-1,000 #	FAIRBANKS	12/11/2013	12/12/2014
138100	DRAWER CYCLE MACH (3)	ENTELEA	VBU	VBU
138112	GRADUATED RULE 36"	STARRETT	10/11/2013	10/11/2014
138078	DIAL INDICATOR ^ 1 "	MITUTOYO	08/29/2007	VBU
114101	GAUGE BLOCK SET 0.050" to 4"	FOWLER	05/11/2010	05/11/2015
138335	STOPWATCH	FISHER SCIENTIFIC	02/19/2014	02/19/2015
138911.1- .41	STEEL BARS	GOOD METALS	6/8/2006	VBU

SEFA 8W 2010 - 4.2 CABINET LOAD TEST:

Date Tested: 3/12-3/13/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

4.2.2 Test Procedure:

Test Method: Verify that the cabinet is level and supported only by the levelers. Load the cabinet top by using 2000lbs (907.2Kg) of solid steel bars (Per Section 3.1) stacked 5 high spaced per Figure 2. After 24 hrs unload the cabinet.

4.2.3 Acceptance Level:

The cabinet will have no signs of permanent failure. After the load is removed inspect the levelers. Any deformation shall not interfere with the function of the leveling system.

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for a photograph.



Cabinet Load Test

SEFA 8W 2010 - 4.3 CABINET CONCENTRATED LOAD TEST:

Date Tested: 7/2-7/3/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

4.3.2 Test Procedure:

Test Method: Using solid weights or 10lb sand bags (Per Section 3.1), apply a total of 200lbs to the top of the cabinet along the cabinet centerline. Operate the doors and drawers.

4.3.3 Acceptance Level:

Drawer and door operation shall be normal under condition of test load. There shall be no signs of permanent deformation to the front rail, cabinet joinery, doors or drawers.

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Concentrated Load Test Procedure

SEFA 8W 2010 - 4.4 CABINET TORSION TEST:

Date Tested: 7/3-7/4/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

4.4.2 Test Procedure:

Test Method:

The cabinet shall be tested in its normal upright position, raised not less than four inches off the floor and supported on rear and one front corner. The area of support under the cabinet shall be centered on the leveling feet of the cabinet. Secure the cabinet diagonally from the supported corner with seven solid steel bars per Section 3.1 350lbs (158.75Kg) of weight on the top of the cabinet to prevent over-turning. Apply four solid steel bars (200lbs (90.72Kg)) to the unsupported corner for a period of fifteen minutes. Remove weight and place the cabinet on the floor in its normal upright position. Observe the cabinet joinery. Level the cabinet and measure the face and back of the cabinet across the diagonal corners.

4.4.3 Acceptance Level:

When returned to normal position, the operation of the cabinet shall be normal, and there will be no signs of permanent damage. The difference between the two measurements taken from measuring the diagonal corners shall be no more than 1/8" (3.175mm).

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Cabinet Torsion Test

4.5 CABINET SUBMERSION TEST:

Dates Tested: 4/1/14
Product Condition: Production

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

4.5.2 Test Procedure:

Test Method: The material thickness along the perimeter of the cabinet shall be measured on 6" (152.4mm) increments. Record the thickness of the material to be submerged in water. Calculate the arithmetic mean of the data taken. Place the entire test cabinet in its upright position such that the cabinet is submerged 1/2 inch above the top of the bottom of the cabinet. After 48 hours, remove the unit from the water. After 48 hours of drying time, measure the thickness of the material at the same points measured initially. Calculate the Production arithmetic mean.

Number of Samples Tested: One (1)

4.5.3 Acceptance Level:

The cabinet will show no signs of permanent deformation or deterioration. Increase in thickness shall not exceed four percent of the initial mean measurements.

Results:

The submitted sample does meet the acceptance criteria for the test described above. The sample had an increase in thickness of 7%.



Cabinet Submersion Test

SEFA 8W 2010 - 5.1 CABINET DOOR HINGE TEST:

Date Tested: 9/22/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

5.1.2. Test Procedure:

Test Method:

With the unit top set as described in Section 4.1, add sufficient weight to the top in order to prevent over-turning. With the cabinet door opened to 90° hang a sling made up of two 100lb weights over the top of the door at a point 12" away from the hinge centerline. Grasping the door by the handle, slowly move the door through the full cycle of the hinge up to a 160° arc. Remove the weight and swing the door through its full intended range of motion and close the door. Repeat on the other door.

5.1.3 Acceptance Level:

Operation of the door, after the test, shall show no permanent damage that will cause binding of the door hinges or that will adversely affect operation of the catch. Both doors must meet the criteria.

Results:

The submitted sample meets the acceptance criteria of the test described. Refer to the following page for a photograph.



Cabinet Door Hinge Test

SEFA 8W 2010 - 5.3 CABINET DOOR CYCLE TEST:

Date Tested: 9/25-10/2/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

5.3.2. Test Procedure:

Test Method:

This test shall be in conformance to the ANSI test procedure A156.9, Grade 1, requirements for cycle testing of doors. A cycling mechanism shall swing door 90-degrees. Door shall operate for 100,000 cycles with a speed not greater than 15 cycles per minute.

5.3.3 Acceptance Level:

Door shall operate for the full cycle period without deterioration that will significantly affect the function of the door. The door shall operate freely without binding.

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Cabinet Door Cycle Test

SEFA 8W 2010 - 6.1 CABINET DRAWERS STATIC LOAD TEST:

Date Tested: 10/1/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

6.1.2. Test Procedure:

Test Method: With unit and top set as described in Section # 4.1, add sufficient weight to the top in order to prevent overturning. Open the drawer to 13" (330.2mm) of travel and hang 150 pounds (68.0 Kg) from the drawer head at the centerline of the drawer for five minutes. Remove the weight and operate the drawer through the full cycle.

6.1.3. Acceptance Level:

There shall be no permanent damage that will interfere with the normal operation of the drawer and the drawer head should remain tightly fastened to the drawer.

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Cabinet Drawer Load Test

SEFA 8W 2010 - 6.3 CABINET DAWER IMPACT TEST:

Date Tested: 9/22/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

6.3.2. Test Procedure:

Test Method: Open the drawer to 13" of travel. Drop a 10lb sand or shot back from a height of 24" above the inside of the drawer at the center of the width and 6" from the inside back face of the drawer. Remove the sand or shot back.

6.3.3. Acceptance Level:

Operate the drawer through the full range of its travel. Drawer shall operate normally. Any deformation will not cause binding or interference with the operation of the drawer.

Results:

The submitted sample meets the acceptance criteria of the test described above. Refer to the following page for a photograph.



Drawer Impact Test

SEFA 8W 2010 6.4 DRAWER INTERNAL ROLLING IMPACT:

Date Tested: 7/2/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

6.4.2. Test Procedure:

Test Method: Place a 2" diameter by 12" long steel rod (approximately 10lbs) 13" from the target impact area such that the rod will roll freely to impact the back of the drawer. Subject the back to three impacts and reverse the drawer and repeat on the front of the drawer.

6.4.3. Acceptance Level:

The drawer shall show no signs (other than minor scratches and dents) of permanent damage. All joinery shall be intact and the drawer, when replaced in the base cabinet, shall operate normally. Minor scratches and dents are acceptable.

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Drawer Internal Impact Test-Drawer Front

SEFA 8W 2010 6.5 CABINET DRAWER CYCLE TEST:

Date Tested: 9/7-9/12/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

6.5.2. Test Procedure:

Test Method:

Laboratory Load (100 pounds (45.35 Kg) – A static load of 100 pounds (45.35 Kg) (using ten 10 pound (4.535 Kg) sand bags (per Section #3.1) shall be uniformly distributed in the drawer. Measure force required to activate the drawer. Operate from a closed position to within 1/4" (6.35mm) of full extension for 50,000 cycles at a rate not to exceed 10 cycles per minute.

6.5.3. Acceptance Level:

The drawer shall operate freely without evidence of dragging rubbing or binding. The force required to open and close loaded drawer shall not be more than a 20% increase of that required prior to test and shall not be greater than 8 pounds (3.628 Kg) to activate hardware.

Results:

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Cabinet Drawer Cycle Test

SEFA 8W 2010 7.1 SHELF LOAD TEST:

Date Tested: 7/2-7/3/14
Condition of Test Samples: Production
Number of Samples Tested: Two (2)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48”L x 35”H x 22”D with 2 1/8” Poplar Top Frame, 1/4” Hardboard back, 1/2” hardwood Plywood, dovetailed reinforced drawer box with Fulterer FR5000 18” FE drawer slides, RPC374-26D door hinges, all other parts 3/4” hardwood veneer core plywood
603-48S	Wall Cabinet	48”W x 12”D x 30”H with 2-1” thick Veneer Plywood adjustable shelves, 1/4” hardwood back, RPC374-26D Door Hinges, all other parts 3/4” hardwood veneer core plywood

7.1.2. Test Procedure:

Test Method:

A shelf shall be mounted in the manner in which it is designed. Measure the distance from the underside of the shelf to a reference point perpendicular to the center of the shelf. Use shot or sand bags weighing 10 pounds (4.535 Kg) each. Unless otherwise specified, load the shelf uniformly to 40 pounds (18.14 Kg) per square foot shelf area to a maximum of 200 pounds (90.70 Kg). Measure the deflection on the shelf by measuring the distance to the reference point and calculating the difference between the two measurements. Record data and remove load from the shelf.

7.1.3. Acceptance Level:

The allowable maximum deflection of a shelf is 1/180 of the span and not in excess of .25” (6.35mm). Maximum allowable deflection shall not exceed 0.25”.

Results:

Shelf Type	Shelf Load	Deflection Measured	Description of Results
Base Cabinet Shelf	200	0.190	Pass
Wall Mount Shelf	135	0.201	Pass

The submitted samples meet the acceptance criteria for the test described above. Refer to the following page for photographs.



Single Drawer/Double Door Base Cabinet



Wall Cabinet

SEFA 8-W-2010 Chemical Spot Test Procedure:

Date Received: 03/17/14
Dates Tested: 03/27/14 - 04/01/14

Description of Samples:

Part Description: Wood Board
Material Submitted: One (1) of 14" x 24" x 0.75" Wood Laminate
Material Specification: SEFA 8-W-2010
Condition of Test Sample: Production

Test Procedure:

Test Method: **SEFA 8-W-2010, Sec 8.1**
The received sample to be tested for chemical resistance as described herein: Place panel on flat surface, clean with soap (Liqui-Nox at 5% concentration) and water and blot dry. Condition the panel for 48-hours at 73±3°F (23±2°C) and 50 ± 5% relative humidity. Test the panel for chemical resistance using forty-nine (49) different chemical reagents by the following methods.

Method A: Test volatile chemicals by placing a cotton ball saturated with reagent in the mouth of a 1-oz. (29.574cc) bottle and inverting the bottle on the surface of the panel. The cotton ball shall remain in contact with the sample for duration of the test.

Method B: Test non-volatile chemicals by placing five drops of the reagent on the surface of the panel and covering with a 24 mm watch glass, concave side down.

For both of the above methods, leave the reagents on the panel for a period of one hour. Wash off the panel with water, clean with detergent (Liqui-Nox at 5% concentration) and naphtha, and rinse with deionized water. Dry with a towel and evaluate after 24 hours at 73±3°F (23±2°C) and 50 ± 5% relative humidity using the following rating system.

Rating Scale: Level 0 No detectable change.
Level 1 Slight change in color or gloss.
Level 2 Slight surface etching or severe staining.
Level 3 Pitting, cratering, swelling, or erosion of coating. Obvious and significant deterioration.

Side: Does not matter per client

Number of Samples Tested: Two (2) Sections

Acceptance Criteria:

The range of results is provided to establish the acceptable range for Laboratory Grade Finish. Results will vary from manufacturer to manufacturer. Laboratory grade finishes should result in no more than four Level 3 conditions. Suitability for a given application is dependent upon the chemicals used in a given laboratory.

Results:

Volatile Chemicals					
Test No.	Chemical	Method	Range	Rating	Comments
1	Acetate, Amyl	A	0-1	0	
2	Acetate, Ethyl	A	0-1	0	
4	Acetone	A	0	0	
6	Alcohol, Butyl	A	0-1	0	
7	Alcohol, Ethyl	A	0	0	
8	Alcohol, Methyl	A	0-1	0	
10	Benzene	A	0-1	0	
11	Carbon Tetrachloride	A	0-1	0	
12	Chloroform	A	0	2	Etch
14	Cresol	A	0-2	0	
15	Dichloroacetic Acid	A	0-3	1	Gloss decrease
16	Dimethylformamide	A	0-2	0	
17	Dioxane	A	0-1	0	
18	Ethyl Ether	A	0-1	0	
19	Formaldehyde, 37%	A	0	0	
21	Furfural	A	0-1	0	
22	Gasoline	A	0	0	
27	Methyl Ethyl Ketone	A	0	0	
28	Methylene Chloride	A	0-1	2	Etch
29	Mono Chlorobenzene	A	0-1	0	
30	Naphthalene	A	0	0	
34	Phenol, 90%	A	0-2	0	
46	Toluene	A	0	0	
47	Trichloroethylene	A	0	0	
48	Xylene	A	0	0	

Non-volatile Chemicals					
Test No.	Chemical	Method	Range	Rating	Comments
3	Acetic Acid, 98%	B	0-1	0	
5	Acid Dichromate, 5%	B	0-1	0	
9	Ammonium Hydroxide, 28%	B	0-2	0	
13	Chromic Acid, 60%	B	0-1	1	Gloss decrease
20	Formic Acid, 90%	B	0-1	2	Etch
23	Hydrochloric Acid, 37%	B	0-2	0	
24	Hydrofluoric Acid, 48%	B	0-2	2	Stain
25	Hydrogen Peroxide, 30%	B	0-1	0	
26	Iodine, Tincture of	B	0-2	2	Stain
31	Nitric Acid, 20%	B	0	1	Stain
32	Nitric Acid, 30%	B	0-2	1	Stain
33	Nitric Acid, 70%	B	2-3	3	Erosion
35	Phosphoric Acid, 85%	B	0-1	0	
36	Silver Nitrate, Saturated	B	0-1	0	
37	Sodium Hydroxide, 10%	B	0-2	1	Gloss decrease
38	Sodium Hydroxide, 20%	B	0-2	1	Gloss decrease
39	Sodium Hydroxide, 40%	B	0-2	0	
40	Sodium Hydroxide, Flake	B	0	0	
41	Sodium Sulfide, Saturated	B	0	0	
42	Sulfuric Acid, 33%	B	0-1	0	
43	Sulfuric Acid 77%	B	0-1	0	
44	Sulfuric Acid, 96%	B	1-3	3	Erosion
45	Sulfuric Acid, (77%) and Nitric Acid (70%), equal parts	B	1-3	3	Erosion
49	Zinc Chloride, Saturated	B	0	0	

Totals			
Items	Requirement	No. Reagent with 3 Ratings	Disposition
Volatile Subtotal:	-	0	---
Non-volatile Subtotal:	-	3	---
Grand Totals:	No More than Four Level 3 Conditions	3	Conforming*

* Suitability for a given application is dependent upon the chemicals used in a given laboratory.

SEFA 8-W-2010 Hot Water Test Procedure:

Date Received: 03/17/14
Dates Tested: 03/31/14

Description of Samples:

Part Description: Wood Board
Material Submitted: One (1) of 14" x 24" x 0.75" Wood Laminate
Material Specification: SEFA 8-W-2010
Condition of Test Sample: Production

Test Procedure:

Test Method: **SEFA 8-W-2010, Sec 8.2**
Procedure: Hot water (190 to 205°F [88°C to 96°C]) shall be allowed to trickle (with a steady stream and at a rate of not less than 6 ounces [177.44cc] per minute) on the finished surface, which shall be set at an angle of 45-degrees, for a period of five minutes.

Side: Does not matter per client
Number of Specimens Tested: One (1) Section

Acceptance Criteria:

After cooling and wiping dry, the finish shall show no visible effect from the hot water.

Results:

Sample	Visible Effects From Hot Water	Disposition
1	None	Conforming

SEFA 8W 2010 9.2 WALL MOUNTED CABINET LOAD TEST:

Date Tested: 7/2-7/3/14
Condition of Test Samples: Production
Number of Samples Tested: One (1)

Part No.	Sample Name	Description of Sample and Components
102-48S	Single Drawer/Double Door Base Cabinet	48"L x 35"H x 22"D with 2 1/8" Poplar Top Frame, 1/4" Hardboard back, 1/2" hardwood Plywood, dovetailed reinforced drawer box with Fullerer FR5000 18" FE drawer slides, RPC374-26D door hinges, all other parts 3/4" hardwood veneer core plywood

9.2.2. Test Procedure:

Test Method:

A wall mounted cabinet shall be mounted as per manufacturer's instructions and is to have the standard number of shelves. Use shot or sand bags weighing 10 pounds (4.535 Kg) each. Load the shelves per Section 7.0. Including the bottom, each shelf, and top uniformly with 40 pounds (18.14 Kg) per square foot shelf area to a maximum of 200 pounds (90.70 Kg).

9.2.3. Acceptance Level:

With weights in place, operate the doors through full travel to verify normal operation of the doors. Remove weights and operate doors to verify normal operation. Verify that there is no permanent deflection of the cabinet top, cabinet back, cabinet bottom, or shelves. After weights are removed, the cabinet shall show no permanent damage to the cabinet, cabinet bottom, or shelves.

Results:

Load Area	Static Load	Description of Results
Cabinet Top	160	Pass
Cabinet Bottom	142	Pass
Shelves	135 ea.	Pass

The submitted sample meets the acceptance criteria for the test described above. Refer to the following page for photograph.



Wall Mounted Cabinet Load Test

SEFA 8W 2010 10.2 TABLE STATIC LOAD TEST:

Dates Tested: 3/13/14
Product Condition: Production

Part No.	Sample Name	Description of Sample and Components
65125-36H	Science Table with H Rails	36"H x 60"W x 30"D with 2 1/4" Solid Lumber legs, 3/4" solid lumber aprons and rails, 4 steel corner braces

10.2.2 Test Procedure:

Test Method: Verify that the Table is level. Load the Table top by using solid steel bars (per Section #3.1) stacked evenly and spaced. (Weight of the top is included in the total load)

Mobile Table Load: 300 lb (136.077 kg)
Free Standing Table Load: 600 lb (272.155 kg)
Fixed Table: 2000 lb (907.184 kg)
Dimensions of Product: 60"W x 24"D x 36"H
Number of Samples Tested: One (1)

10.2.3 Acceptance Level:

No structural breakage shall result from application of the load. With the full load, the apron rails shall not deflect more than 1/360 of the span of the table and not to exceed 1/8" (3.175 mm).

Results:

Static Load	Deflection	Description of Results
600 lbs	0.095	Pass

There was no structural damage to the unit. The sample meets the acceptance criteria. Refer to the following page for photograph.



10.2 Table Static Load

SEFA 8W 2010 10.3 TABLE RACKING PROCEDURE:

Dates Tested: 4/14-4/17/14
Product Condition: Production

Part No.	Sample Name	Description of Sample and Components
65125-36H	Science Table with H Rails	36"H x 60"L x 30"W with 2 1/4" Solid Lumber legs, 3/4" solid lumber aprons and rails, 4 steel corner braces

10.3.2 Test Procedure:

Test Method
Dimensions of Product: 36"H x 60"L x 30"W
Racking Angle: 45 Degrees
Time Under Test: 72 hours

Number of Samples Tested: One (1)

10.3.3 Acceptance Criteria:

There shall be no structural damage to end panels, legs, or bases. The operation of the table shall be normal.

Results:

The sample meets the acceptance criteria. Refer to the following page for photograph.



10.3 Table Racking

