



Test Report

No.SDHL2112022779FT

Date: Dec 16, 2021

Page 1 of 17

DOREL HOME FURNISHINGS EUROPE LTD
BUILDING 4,IMPERIAL PLACE,MAXWELL ROAD,,BOREHAMWOOD,HERTFORDSHIRE,WD6 1JN

Sample Description : LAWRENCE 4 SHELF LADDER BOOKCASE BUNDLE
Ref. No / Item No. : 9482096UK
Buyer : DOREL HOME FURNISHINGS EUROPE LTD
Manufacturer : COLOR STAR PRODUCTS CO. LTD.
Supplier : COLOR STAR PRODUCTS CO. LTD.
Country of Origin : CHINA
Country of Destination : UNITED KINGDOM

As above test item and its relevant information regarding to the submission are provided and confirmed by the applicant. SGS is not liable to either the test item or its relevant information, in terms of the accuracy, suitability, reliability or/and integrity accordingly.

Sample Receiving Date : Dec 03, 2021
Test Performing Date : Dec 06, 2021 to Dec 16, 2021
Test Performed : Selected test(s) as requested by applicant

Test Result Summary

No.	Test(s) Requested	Result(s)	Comments
1	BS EN 14749:2016	PASS	/
2	BS 4875-7:2006+C1:2006 (Level 2)	PASS	/

For further details, please refer to the following page(s)

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Shunde Branch

Bill Wang
Authorized Signatory

scan to see the report



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SGS-CSTC Standards Technical Services Co., Ltd.
Shunde Branch Harbin

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TESTS AND RESULTS
Part 1. Test Conducted:

BS EN 14749:2016 Domestic and kitchen storage units and kitchen worktops — Safety requirements and test methods

No. of Sample:

1 piece (Sample #1). For more sample information and pictures, please refer to the following page.

Test and Requirements	Test Results
5.2 General safety requirements	
5.2.1 General - Components or parts with which the user may come into contact during normal use shall have no burrs and/or sharp edges, nor shall there be any open-ended tubes. - All movable parts accessible during normal use shall have safety distances in any position during movement of ≤ 8 mm or ≥ 25 mm. This applies to any components moving relatively to each other, with the exception of doors, flaps and extension elements including their hardware. The safety distances also apply to the distance between handles/handgrips and other components.	PASS
5.2.2 Units moving vertically In order to avoid pinching points for feet, the safety height for vertically moving units shall be at least 100 mm from the floor.	N/A
5.2.3 Lids In order to prevent children's heads and necks from being entrapped by hinged lids of storage units horizontal lids that are 1 000 mm or less from the floor and weigh 0,25 kg or more, shall be provided with lid-support mechanisms to prevent sudden collapse or dropping of the lid. The lid-support mechanism shall support the lid so that at no position in the arc of travel of the lid from within 50 mm of the fully closed position through an arc not to exceed 60° from the fully closed position shall it drop more than 12 mm under the influence of its own mass, except in the last 50 mm of travel. The test shall be carried out in accordance with EN 71-1:2014, 8.31.2. In the case of adjustable mechanisms, product information shall be given for the correct adjustment.	N/A
5.2.4 Vertically moving roll fronts and vertically moving sliding doors All roll fronts and doors sliding vertically including those constructed from hinged elements shall not move by themselves from any position higher than 200 mm measured from the closed position.	N/A
5.2.5 Extension elements All extension elements whose total mass (according to 5.1.3) exceeds 10 kg but where safety tests are not required shall have effective open stops, i.e. they shall resist being pulled out of the unit once by a horizontal force of 200 N applied to the handle of the loaded extension element, or they shall be supplied with product information to this effect.	N/A
5.3 Structural safety requirements:	



Test and Requirements	Test Results
5.3.1 General The tests and requirements in 5.3.2 to 5.3.9 apply to any component only when: — the height to the centre of gravity of the component is > 900 mm above the floor and the total mass (5.1.3) is ≥ 10 kg; or — the height to the centre of gravity of the component is > 350 mm and the total mass (5.1.3) is ≥ 35 kg. Where specified in EN 16122, storage units and their components shall be loaded in accordance with Table 1. Unless otherwise specified, all storage components, which are not subject to testing, shall be uniformly loaded with the specified load(s). When the unit or component is conspicuously and durably marked by the manufacturer with a maximum load, the unit or component shall be loaded with the stated maximum load multiplied by 1.2.	
5.3.2 Shelves	
5.3.2.1 Shelf retention – vertical downward Unloaded shelves shall not fall down when apply the vertical downward force of 100 N by means of the 50 mm diameter loading pad to a point 25 mm in from the front edge of the shelf at the position most likely to cause failure	PASS
5.3.2.2 Shelf retention – horizontal downward Unloaded shelves shall not fall down when apply a horizontal outwards force of 50 % of the weight of the unloaded shelf to the middle of the front edge of the shelf.	PASS
5.3.3 Shelf supports If the clear height is less than 200 mm the test is not carried out. Load all horizontal surfaces e.g. shelves, tops and bottoms that can be used as storage area uniformly with the load specified in Table 1, except at 220 mm from one support (the tested one surface), where the impact plate No. One (1.7kg) shall be tipped over 10 times over the support. The striking surface of the impact plate shall be that faced with rubber. All supports of the shelf shall be tested. In case of identical shelf supports and horizontal surfaces only one test shall be carried out. After the test, the horizontal surface and the shelf supports shall show no fracture or other damage that can affect the safety.	PASS
5.3.4 Storage area-volume for heavy appliances This test is only applicable to units with shelves which are designed to carry heavy appliances, e.g. refrigerator, washing machine. In derogation to EN 16122:2012, 6.2.1 the test shall be carried out on all shelves, tops or bottoms which are intended to carry heavy appliances irrespective of the height above the floor. The test shall be carried out for one week according to EN 16122:2012, 6.2.1 with the load specified in Table 1. After the test the shelves, tops or bottoms and the shelf supports shall show no fracture or other damage that can affect the safety.	N/A
5.3.5 pivoted doors	



Test and Requirements	Test Results
5.3.5.1 Vertical load of pivoted doors This test applies to all doors hinged to the vertical side, including folding doors. Mount stops around the legs or base in order to prevent the unit from moving on the floor during the tests. Load any storage component on the door to be tested as specified. Load the door with the mass of 30 kg, which shall be suspended 100 mm from the edge furthest from the hinge. Open and close the door ten full cycles (back and forth) from a position 45° from fully closed to a position 10° from fully opened, up to a maximum of 135° from the fully closed position. Opening and closing can be done by hand using 3 s to 5 s for opening and 3 s to 5 s for closing. After the test the door shall remain attached to the unit.	N/A
5.3.5.2 Horizontal load of pivoted doors This test applies to all doors hinged to the vertical side, including folding doors. Mount stops around the legs or base in order to prevent the unit from moving on the floor during the tests. Load any storage component on the door to be tested as specified. This test is not applicable for doors with an opening angle > 135°. Apply the horizontal static load of 60N perpendicular to the plane of the door on its horizontal centreline 100 mm from the edge furthest from the hinge. Apply the load ten times. After the test the door shall remain attached to the unit.	N/A
5.3.6 sliding doors and horizontal roll fronts This test applies to all doors sliding horizontally including those constructed from hinged elements. Mount stops around the legs or base in order to prevent the unit from moving on the floor during the tests. The door shall be opened/closed by means of a string or cord attached to the centre of the handle. If the handle has a length greater than 200 mm, the string shall be attached 100 mm below the top of the handle up to a maximum height from the floor of 1 200 mm. If the door has no handle, the string shall be attached at the middle of the door height. Determine the mass m_1, required to just move the door. The test mass shall be $m_1 + 4\text{kg}$. Close/open the door/roll front 10 times towards the fully closed/opened positions using the masses ($m_1 + 4\text{kg}$). Start the movement 300 mm from the closed/opened positions respectively. The test mass shall act until 10 mm before the door/roll front is fully closed/opened. After the test there shall be no fracture or other damage that can affect the safety.	N/A
5.3.7 Extension elements 5.3.7.1 Slam open of extension elements The test is applicable only to extension elements fitted with stops in the open position. Place stops around the legs or base in order to prevent the unit from moving on the floor during the tests. Place the extension element on its runners and load it as specified. The slamming force shall act until 10 mm before the extension element reaches its end travel. Apply the force to the handle or, in case of two handles, in the middle between the handles. On extension elements without a handle, apply the force at the same level as the runners. Slam the extension element open ten times using velocities specified. Throughout the test, the extension elements shall not fall out of the cabinet.	N/A



Test and Requirements	Test Results
5.3.7.2 Strength test of extension elements Place stops around the legs or base in order to prevent the unit from moving on the floor during the tests. Open the extension element to its open stops, or if there are no open stops, to the point at which one-third of the inside length (depth) of the extension element, or at least 100mm, remains inside the unit. Apply the vertical downwards static force of 200N on one top corner of the extension element front. Apply the specified force of 200N or the force that causes the extension element to deflect to a point 100 mm below its horizontal position whichever is the smaller. The force shall be recorded in the test report. Repeat 10 times. After the test there shall be no fracture or other damage that can affect the safety. After the test the extension element shall remain attached to the unit.	N/A
5.3.8 Bottom hinged flaps This test only applies to flaps intended to be loaded when used in the open position. The flap shall not be loaded according to Table 1. With the flap in its fully opened/extended position, load with the static force of 200N. Apply the force 10 times, 50 mm from the weakest corner. After the test, the flap and/or the unit shall show no fracture or other damage that can affect the safety.	N/A
5.3.9 Top hinged flaps Close the flap and apply a vertical static load of 150 N. The load application points shall be at the surface 50 mm from the left, right and bottom edges . Carry out five times at each side. After the test there shall be no fracture or other damage that can affect the safety and the flap or components of it shall not become detached.	N/A
5.3.10 Kitchen- worktops and other top surfaces	
5.3.10.1 General Tests and requirements are applicable to all kitchen-worktops and all other top-surfaces regardless of their mass and with a height $\leq 1\,000$ mm and with a depth of the top surface ≥ 250 mm.	
5.3.10.2 Static load test for kitchen- worktops The kitchen- worktops shall not be loaded. Apply through the loading pad of 100mm in diameter the vertical downwards force of 1000N ten times at any position likely to cause failure but not less than 50 mm from the edges. If there are several such positions, apply the load ten times to a maximum of three positions. The bottom surfaces shall not be tested. After the test the kitchen-worktop and/or the unit shall show no fracture or other damage that can affect the safety.	N/A
5.3.10.3 Static load test for other top surfaces The top surfaces shall not be loaded. Apply through the loading pad of 100mm in diameter the vertical downwards force of 750N ten times at any position likely to cause failure but not less than 50 mm from the edges. If there are several such positions, apply the load ten times to a maximum of three positions. The bottom surfaces shall not be tested. After the test the top surface and/or the unit shall show no fracture or other damage that can affect the safety.	N/A
5.3.11 Wall hanging units and top hanging units	



Test and Requirements	Test Results
5.3.11.1 General The tests in 5.3.11 shall be carried out on all wall hanging units and top hanging units with a total mass ≥ 10 kg. All components shall be tested irrespective of their total mass. But the safety requirements specified in 5.3.1 to 5.3.10 do not apply to components with a total mass < 10 kg. The unit(s)/component(s) shall be mounted and adjusted according to the manufacturer's installation instructions. If mounting or assembly instructions are not supplied, adjustable wall attachment devices shall be adjusted to the maximum depth (as far from the wall as possible) and to the mid of the height adjustment range. The unit shall then be levelled by means of distance devices placed as low and as far apart as possible. 5.3.11.2 Movable components, shelf supports and top surfaces Load according to Table 1. As soon as possible after the loading, carry out the following tests regardless of mass and height of centre of gravity of components: — 5.3.3: Shelf supports; — 5.3.5: Pivoted doors; — 5.3.6: Sliding doors and horizontal roll fronts; — 5.3.7: Extension elements; — 5.3.8: Bottom hinged flaps; — 5.3.9: Top hinged flaps; — 5.3.10.2: Kitchen work tops ≤ 1000mm from the floor with the derogation that the test shall be carried out at one point most likely to cause failure; — 5.3.10.3: Top surfaces $\leq 1\,000$ mm from the floor with the derogation that the test shall be carried out at one point most likely to cause failure - this test is applicable for top surfaces with a depth > 250 mm. These tests shall be carried out on those components most likely to cause failure to the wall attachment. After the test the unit shall remain attached to the building (wall/ceiling) and shall carry the test load. It is acceptable that for each test components with a total mass less than 10 kg can become detached.	N/A



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Test and Requirements	Test Results
5.3.11.3 Overload After carrying out the tests in 5.3.11.2, increase the load on all the storage areas according to the following principle: — Load on bottom: 250 kg/m²; — Load on first shelf: 150 kg/m²; — Load on second shelf: 100 kg/m²; — Load on third and following shelves: 62.5 kg/m²; — Load on top surface: 50 kg/m². Additionally to that load: — water basins/sinks shall be completely filled with water or an equivalent mass; — extension elements shall be loaded with their load according to Table 1 adding 20 % or the manufacturer's instructions adding 20 %. All doors and extension elements shall be open during the test. If the number of shelves is not determined by the structure of the unit, divide the internal height of the unit in millimetres by 200 and take the lower integer. This number minus 1 shall then be the number of shelves to be used during testing. If the volume of the unit, calculated by the inner width, depth and height, is > 0,225 m³, the loads shall be multiplied by the factor $R: R = 1.2/(0.75+2V)$ where V is the volume of the unit in m³. When reduction of the load is necessary, it shall be removed from the bottom. The unit shall be loaded for one week. After the test the unit shall remain attached to the building (wall/ceiling) and shall carry the test load.	N/A
5.3.11.4 Sideways detachment test The unit shall not be loaded. Close all extension elements, flaps, roll fronts and doors. Apply, by means of the loading pad of 100mm in diameter, the horizontal force of 100N or for a maximum distance of 100 mm one time at points A and B on the centreline of the side of the unit 50 mm from the top and at points C and D 50 mm above the bottom. If no structural member exists at this position, apply the force by means of a rigid bar. During and after the test the unit shall not become detached.	N/A
5.3.11.5 Vertical dislodgement test The unit shall not be loaded. Close all doors, flaps and extension elements. Apply to the unloaded storage unit the vertical upwards force of 100N at the least favourable point of the front edge. The force shall be removed if the vertical distance of travel of the force is more than 10 mm. During and after the test the unit shall not become detached.	N/A
5.4 stability	



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Test and Requirements	Test Results
5.4.1 General The following requirements apply to free standing storage units with a height to the top of the unit ≥ 600 mm above the floor level and when the potential energy (3.15) exceeds 60 Nm. Free standing units which fall under the principles in 5.1 shall be tested for stability according to Table 3, following the order listed in Table 3. The stability requirements are fulfilled when, during testing in accordance with Table 3, the storage unit does not overturn. If during testing the overturning movement is prevented by the opening of an extension element, door or flap the component shall be prevented from opening and the test repeated. Where specified, the unit shall be loaded in accordance with the loads specified in Table 2. When the unit or component is conspicuously and durably marked by the manufacturer with a maximum load, the unit or component shall be loaded with the stated maximum load multiplied by 0.5, but the load shall not exceed the value calculated using Table 2.	
5.4.1.1 Doors, extension elements and flaps closed, all storage areas unloaded - Units that are, or can be, adjusted to a height of 1000 mm or less Apply the vertical force of 750 N by means of the loading pad of 100mm in diameter on the top surface acting 50 mm from the outer edge of the unit at any point likely to cause overturning. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A
5.4.1.2 Doors, extension elements and flaps closed, all storage areas unloaded - Units that are, or can be, adjusted to a height of more than 1000 mm Apply the vertical force of 350 N together with the outward horizontal force resulting in an outward moment of 50 Nm on the top surface acting 50 mm from the outer edge of the unit at any point likely to cause overturning. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A
5.4.1.3 All storage areas unloaded and all doors, extension elements and flaps open All doors shall be opened to 90° and all extension elements shall be fully opened, except where there are no open stops, in which case they shall be opened to two thirds of the internal length. All flaps shall be fully opened. Interlock mechanisms shall not be overridden. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A
5.4.1.4 All storage areas unloaded, with overturning load Doors shall be opened to 90° and extension elements shall be fully opened, except where there are no open stops, in which case they shall be opened to two thirds of the internal length. Flaps shall be fully opened. Extension elements and flaps shall be opened across the full width of the unit. Only one extension element in each vertical line of extension elements shall be opened so as to produce the configuration most likely to cause overturning. Apply the vertical force of 75N to any point likely to cause overturning, on the centreline of the front of an extension element or 50 mm from the outer edge of a door or flap. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A



Test and Requirements	Test Results
5.4.1.5 All storage areas loaded, with overturning load All storage areas shall be loaded with the loads specified in Table 2. Doors shall be opened to 90° and extension elements shall be fully opened, except where there are no open stops, in which case they shall be opened to two thirds of the internal length. Flaps shall be fully opened. Extension elements and flaps shall be opened across the full width of the unit. Only one extension element in each vertical line of extension elements shall be opened so as to produce the configuration most likely to cause overturning. Unless conspicuously and durably marked by the manufacturer with a maximum load, the total mass of the unit shall be the weight of the unloaded item plus the load in the unit when loaded with the specified loads. Apply a vertical force of 20 % of the total mass of the units loaded according to Table 2, but not greater than 300 N, to any point most likely to cause overturning, on the centerline of the front of an extension element or 50 mm from the outer edge of a door or a flap. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A
5.4.1.6 Doors, extension elements and flaps closed and locked All storage areas shall be loaded with the loads specified in Table 2. When two or more doors can be locked, the test shall be carried out on one closed door with the other door opened at 90°. If doors and flaps provide access to other extension elements or flaps, these shall be opened when carrying out the test. Apply the horizontal outwards force of 100N in turn to all locked doors, extension elements and flaps. The force shall be applied to the centre of the handhold, handle, knob etc. in the direction of opening. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A
5.4.2 Kitchen floor units with kitchen-worktops In addition to the tests in 5.4.1 carry out the test according to the Clause 5.4.1 and 5.4.2 with a horizontal outwards overturning moment of 200 Nm. During testing, all doors, flaps and extension elements shall be closed.	N/A
5.4.3 Stability of TV-furniture	
5.4.3.1 General The requirements for TV-furniture specified in 5.4.3.2 and 5.4.3.3 are additional to the requirements in 5.4.1.	



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Test and Requirements	Test Results
5.4.3.2 one door, extension element or flap opened – storage areas unloaded The unit shall be unloaded. One door shall be opened to 90° and extension elements shall be fully opened, except where there are no open stops, in which case they shall be opened to two thirds of the internal length. Flaps shall be fully opened. Apply the specified vertical force of 150N at the centre of the front of each extension element and 75 mm from the outermost edge of the door or flap. Extension elements and flaps shall be opened across the full width of the unit. Only one extension element in each vertical line of extension elements shall be opened so as to produce the configuration most likely to cause overturning. Apply the vertical force of 150N to any point likely to cause overturning, on the centreline of the front of an extension element or 50 mm from the outer edge of a door or flap. Record if the unit overturns or is supported by an open extension element, opened door or opened flap.	N/A
5.4.3.3 Door, extension element or flap closed – storage areas unloaded Load the TV-furniture top surface with the mass of 27 kg acting 15 cm from edge of the unit and sideways on a length of 50 cm where it is likely to have the worst stability consequence. The mass shall not overhang the edge of the unit. Place stops in front of the feet or castors of the unit and apply an outwards overturning moments of 60Nm in the direction most likely to cause it to overturn.	N/A
5.5 Floor standing units intended to be attached to the building The requirements only apply to storage units where the top of the unit is 600 mm or more above the floor level, and when the potential energy exceeds 60 Nm. This test applies to units standing or resting on the floor and mounted to the building, e.g. a wall. The unit shall be mounted according to the manufacturer's instructions. If the manner of mounting is ambiguously defined, the manner of mounting shall be recorded in the test report. Apply the horizontal outwards static force of 200N to the centre of the top edge of the unit. The force shall be maintained for not less than 10 s and not more than 15 s. After the test, the unit shall remain attached to the wall structure.	PASS
5.6 Vertical glass components Any external, vertical glass component $\geq 0,1 \text{ m}^2$ in area, where the smallest dimension is $\geq 200 \text{ mm}$ and any component of which is $< 900 \text{ mm}$ above the floor, shall not break when tested according to EN 14072:2003, or shall break as specified in EN 14072:2003, Clause 7, c) 2) or c) 3). This test shall not be carried out if the glass fulfils the requirements in EN 12150-1:2015, Clause 8, "Fragmentation test", or where the mode of breakage (β) according to EN 12600 is Type B or Type C. This test shall not be carried out for vertical glass components which are fully supported by a carrier material (e.g. particle board). Load storage areas according to Table 1. The test shall be carried out according to EN 14072:2003 with a drop height of 70 mm. The impact point shall be on the most adverse corner 100 mm from each visible edge of the glass. The glass shall be impacted once.	N/A



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Test and Requirements	Test Results
6 Product information Any unit intended to be attached to the building shall be supplied with installation instructions in the language of the country, where the furniture is sold. The instructions shall contain at least the following information, if applicable: a) installation shall be carried out exactly according to the manufacturer's instructions – otherwise a safety risk can occur if incorrectly installed; a warning shall be given to the consumer to notify them of related risks: EXAMPLE 1 For floor standing units intended to be attached to the building: WARNING In order to prevent overturning this product must be used with the wall attachment device provided. EXAMPLE 2 For wall hanging units: WARNING In order to prevent falling down this product must be used with the wall attachment device provided. EXAMPLE 3 For wall hanging units and top hanging units: WARNING Assess the suitability of the wall/ceiling to ensure that the fastening devices will withstand the forces generated. b) where there are no open stops for the extension element information shall be provided about the potential risk of extension element can be pulled out of the unit. For self-assembly furniture the following additional information is required: c) list of parts supplied; d) list of tools required; e) diagram of the bolts and other fastenings required.	PASS



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Part 2. Test Conducted:

BS 4875-7:2006+C1:2006 Strength and stability of furniture – Domestic and contract storage furniture-performance requirements.

General Test Condition:

The following test program was conducted in a laboratory environment maintained at 15°C to 25°C and 50%±5 RH. The sample was individually tested after conditioning in the test environment for at least 24 hours prior to conducting the test.

The complete detailed procedures may be found in the referenced specification and are only summarized herein. Unless otherwise specified, the tests are carried out in the following order on the same sample.

No. of Sample:

1 piece (Sample #1). For more sample information and pictures, please refer to the following page.

Test Level: Level 2. For the test level in relation to applications, please refer to Annex A in this report.

Test	Test Description and Requirements	Test Results
4	Strength and Durability Requirements When after the item of furniture has been tested as below, at the selected test level, none of the following shall have occurred: - any fracture of any member, joint or component, including castors; - any loosening, shown to be permanent by hand pressure applied to suitable members, of joints intended to be rigid; - any deformation or wear of any component that will affect its function; - any loosening of any means of fixing components to the article; - any changes that prevent movable parts opening or closing freely or that cause movable parts, other than drawers, to require application of a force in excess of 100 N for operation; - any deflection of shelves or tops greater than span/200 for particle board, span/150 for wood or span/100 for other materials; - any deflection of clothes rails greater than span/100; - any force required to move drawers in excess of 70 N and any force required to maintain movement in excess of 45 N.	
5	Test All the test methods are with reference to ISO 7170:2005.	
ISO 7170:2005 6.2.2	Static load test for tops and bottoms Apply a vertical downwards force of 600 N for 10 times at any position likely to cause failure but not less than 50 mm from the edges.	N/A
ISO 7170:2005 6.2.1	Sustained load test for tops and bottoms Load the top or bottom uniformly with the load of 1.0 kg/dm ² and apply for: — one hour for tops and bottoms made of metal, glass and stone; — one week for all other tops and bottoms. Measure and record the deflection under load as specified above.	N/A



Test	Test Description and Requirements	Test Results
ISO 7170:2005 6.1.4	Strength of shelf supports Load the shelf uniformly with half the load specified for 6.1.3, except at 220 mm from one support, where the impact plate shall be tipped over 10 times over the support. All supports of the shelf shall be tested.	PASS
ISO 7170:2005 6.1.3	Deflection of shelves Load the shelf uniformly with the load of 1.0 kg/dm ² and apply for: — one hour for shelves made of metal, glass and stone; — one week for all other shelves. Measure and record the deflection under load.	PASS
ISO 7170:2005 6.3.1	Strength of clothes rail supports Place the rail on its supports in the unit. Apply the load of 4.0kg/dm as close as possible to the weakest support.	N/A
ISO 7170:2005 6.3.2	Dislodgement of clothes rails Load the rail uniformly with the load of 4.0kg/dm and apply for: — one hour for metal rails; — one week for all other rails.	N/A
ISO 7170:2005 7.1.2.1	Vertical load on pivoted doors Load the door with the mass of 15 kg. The mass shall be suspended from the edge furthest from the hinge. Open and close the door 10 full cycles (back and forth) from a position 45° from fully closed to a position 10° from fully opened, up to a maximum of 135° from the fully-closed position.	N/A
ISO 7170:2005 7.1.2.2	Horizontal load on pivoted doors Apply the horizontal static load of 50 N perpendicular to the plane of the door on its horizontal centerline, 100mm from the edge furthest from the hinge. Carry out the test 10 times.	N/A
ISO 7170:2005 7.2.3	Durability of sliding doors and horizontal roll fronts Open and close the door/roll-front for the number of 20000cycles. The movement shall be 50 mm from the fully closed position, without forcing the stops, to a position approximately from the fully open position. The door shall be opened/closed gently at a rate of 6 to 15 cycles per minute. If the door/roll-front has a catch device at any position, operate this at each cycle.	N/A
ISO 7170:2005 7.1.3	Slam shut test of pivoted doors Determine the mass, m ₁ , required to just move the door. The test mass shall be m ₁ +m ₂ . m ₂ =2 kg. Slam shut the door 10 times using the masses (m ₁ +m ₂). The test mass shall act until before the door is fully closed. The mass shall fall through a distance of 300mm or the distance required closing the door through, whichever is the smaller.	N/A



Test	Test Description and Requirements	Test Results
ISO 7170:2005 7.1.4	<i>Durability of pivoted doors</i> Attach two masses, 1kg each, and one on each side of the door at the middle of the vertical centerline. Fully open the door to a maximum of 130° and close it for the number of 20000cycles (back and forth) without forcing built-in stops in the open position. If the door has a catch device at any position. The door shall be gently opened and closed at each cycle using approximately 3s for opening and 3s for closing the door.	N/A
ISO 7170:2005 7.2.2	<i>Slam shut/open of sliding doors and horizontal roll fronts</i> Determine the mass, m1, required to just move the door. The test mass shall be m1+m2. m2=2 kg. Slam shut the door 10 times using the masses (m1+m2). The mass shall fall through a distance of 300mm from the closed/opened positions respectively. The test mass shall act until 10mm before the door/roll-front is fully closed/opened.	N/A
ISO 7170:2005 7.3.1	<i>Strength of bottom-hinged flaps</i> With the flap in its fully opened/extended position, load with the static force of 100N. Apply the force 10 times, 50mm from the weakest corner	N/A
ISO 7170:2005 7.3.2	<i>Durability of flaps</i> Open/close the flap for the number of 10000cycles. Use approximately 3s for opening respectively and 3s for closing the flap. If the flap has a catch device at any position, this shall be allowed to operate at each cycle. Self-locking stays shall be opened until just before they lock and then closed from that position.	N/A
ISO 7170:2005 7.3.3	<i>Drop test for top-hinged flaps</i> Lift the door/flap until it is horizontal and allow it to drop freely for the number of 100 cycles	N/A
ISO 7170:2005 7.4.2	<i>Durability of vertical roll fronts</i> By means of a force applied on the vertical centerline, open and close the roll-front fully and gently at a rate of 6 to 15 cycles per minute for the number of 5000 cycles.	N/A
ISO 7170:2005 7.4.1	<i>Slam shut/open of vertical roll fronts</i> Allow the roll-front to fall freely in both directions from as near the point of equilibrium as possible for the number of 10 cycles. If the roll-front does not fall, the test shall be carried out according to the same principle as specified in 7.2.2 with the force applied on the vertical centerline.	N/A
ISO 7170:2005 7.5.2	<i>Strength of extension elements</i> Open the extension element to its open stops, or if there are no open stops, to the point at which one-third of the inside length (depth) of the extension element, or at least 100mm, remains inside the unit. Apply the vertical downwards static force of 150N on one top corner of the extension element front. Repeat 10 times.	N/A



Test	Test Description and Requirements	Test Results
ISO 7170:2005 7.5.3	Durability of extension Elements Load the extension element as specified. Without impacting the stops, or providing vertical support, open and close the extension element gently for the number of 20000cycles. Extension elements that do not have open stops shall be opened to a point at which one-third of the inside length (depth) of the extension element, or at least 100mm, remains inside the unit. If the extension element has a catch device at any position, this shall be allowed to operate at each cycle. The extension element shall be opened/closed gently at a rate of 6 to 15 cycles per minute.	N/A
ISO 7170:2005 7.5.4	Slam open/shut test of extension elements Place the extension element on its runners and load it as specified. Open the extension element 300mm, or fully open it if it can not be opened 300mm. Extension elements without stops in the open position shall be opened until remains inside the unit. Slam shut the extension element 10 times using the velocities specified.	N/A
ISO 7170:2005 7.5.5	Displacement of extension element bottoms Place the extension element on its runners or suspend it in a similar way, and load it. Apply a static force of 40N approximately 25mm above the bottom of the extension element, acting at the middle of the front and back of the extension. Apply the force 10 times.	N/A
ISO 7170:2005 7.5.6	Interlock test When interlocks are fitted, one extension element shall be fully extended and an outwards force of 200N shall be applied to the handles of each of the remaining extension elements one at a time. The test shall be carried out a total of 10 times on each extension element. Record if the extension elements remain closed.	N/A
ISO 7170:2005 7.6.2	Strength test for locking and latching mechanisms for extension elements Apply a force of 200N in the direction of travel of the extension element at a direction 90° to the front of the element and at 30° to that direction, upwards, downwards, to the left and to the right. Repeat the test 10 times for each extension element.	N/A
ISO 7170:2005 7.6.3	Strength test for locking and latching mechanisms for doors, flaps and roll fronts Apply a force of 200N in the direction of travel of the door/flap/roll-front and at 30° to that direction, upwards and downwards. Repeat the test 10 times for each door.	N/A
ISO 7170:2005 6.4.1	Test for structure and under frame Load all parts intended for storage. Close extension elements, flaps, roll-fronts and doors. Apply the static force of 250N 10 times at point A on the centre line of the side of the unit as high as possible but not higher than 1600mm from the floor. Repeat this procedure 10 times at points B, C and D, with the legs or base still restrained by stops.	N/A



Test	Test Description and Requirements	Test Results
ISO 7170:2005 6.4.3	Test for units with castors or wheels Apply the force at the same point as in 6.4.1, on the centre line of the side of the unit as high as possible but not higher than 1600mm from the floor. Move the unit (600±20) mm back and forth at a rate of (10±2) cycles per minute for 500 cycles. One cycle consists of a forward and a backward stroke. Inspect the castors and the structure for damage, which could affect functioning, immediately after testing and after a recovery period of 24h.	N/A
ISO 7170:2005 8.1.3	Sustained load test Load all the storage areas with the specified load of 1.0 kg/dm ² according to the following principle. If the number of shelves is not determined by the structure of the unit(s) or specified in a requirement document, divide the internal height of the unit(s), expressed in millimeters, by 200 and take the lower integer. This number shall then be the number of shelves to be used during testing. — Load on bottom: Specified load — Load on first shelf: Specified load×0,6 — Load on second shelf: Specified load×0,4 — Load on third and following shelves: Specified load×0,25 — Load on top surfaces: Specified load×0,2 If the volume of the unit, calculated by the inner width, depth and height, is greater than 0,225 m ³ , the total load shall be multiplied by the factor R. The unit shall be loaded for one week. Check whether the unit remains attached to the structure and carries the test load.	N/A
ISO 7170:2005 8.1.4	Dislodgement test Assemble the units according to the manufacturer's instructions. Apply to the unloaded unit the vertical upwards force of 200N at the least favorable point of the front edge.	N/A

Annex A: Test level in relation to applications

Test level	Performance category	Example of use
1 Delicate	--	Cabinets of delicate appearance
2 Careful domestic	--	Domestic bedroom
3 General domestic	Careful contract	Domestic living/dining room or hotel bedroom
4 Severe domestic	General contract	Cabinets where rough treatment and careless handling occur e.g. college study, hotel reception
5 --	Severe contract	Cabinets intended for exceptionally severe use e.g. transport terminus, student common room and barrack room

Remark:

1. N/A – Not applicable; N/R – Not requested; N/P – Not provided.
2. For the sample information and pictures, please refer to the following page.



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SAMPLE INFORMATION AND PICTURES

Weight: 14.15 kg

Overall Dimensions: 520 mm W x 465 mm L x 1525 mm H

Other Dimensions: /

Sample as Received



View 1



View 2



View 3



View 4

End of Report



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