

## TABLE OF CONTENTS

<b>A.Raw material</b> (原料)	2
1. Particleboard(刨花板)	2
2. Medium density fibreboard(中密度纤维板)	3
<b>B.Furniture specification</b> (家具标准)	4
1. Wood-base board furniture(人造板家具标准)	4
2. Paint requirement(涂饰要求)	7
<b>C.Counter Top</b> (台面)	7
1. Artifical Stone(人造石)	8
2. Natural Stone(天然石)	8
<b>D.Hardwarefitting</b> (五金配件)	8
1. Hinge(铰链)	9
2. Hardware for wall cabinet installation(吊码)	9
3. Handle(拉手)	9
4. Hardware connect(连接件)	9
5. Drawer slider(抽屉滑轨)	9
<b>E.Accessory</b> (辅件)	9
1. Mirror/glass(镜子、玻璃)	10
2. Support(支撑件)	10
<b>F.Packaging, storage, transportation</b> (标志、包装、储存、运输)	11

## A Raw Material

### 1a. Recommended type of particleboard:

The moisture resistant, melamine reinforced surface, three-layer structure particleboard is recommended in areas subject to high humidity.

Surface and edges must be sealed. The face adhering material of the wood-base board should conform to stipulations of GB/T7911—1999 Thermoset resin impregnated high-pressure laminated (HPL) decorative board.

Material must not come into direct contact with water. It is designed to give extra durability in areas of high humidity but is not waterproof.

### 1b. Material characteristics

SHEET TOLERANCES		
Length & width	mm	±2
Thickness	mm	±0.2
Straightness	mm/m	±0.5
Squareness	mm	3
Warp	%	≤0.8

PHYSICAL PROPERTIES		%	
Moisture content		g/cm <sup>3</sup>	4—13
Density		%	0.5—0.8
Thickness swell		N	≤6
Face screw holding (for board thickness ≥16 mm)		N	≥1200
Edge screw holding (for board thickness ≥16 mm)		%	≥800
Average density deviation inside the board		%	±5.0
Limit of formaldehyde emission (the perforator test value)	E1 Grade E2 Grade	mg/100	≤9.0 9.0—30.0

### VISUAL CHARACTERISTICS

Broken trace	Not admissible
Through crack	Not admissible
Glue stain	Not admissible
Paraffin stain	Not admissible
Oil stain	Not admissible
Edge defects	Not admissible
Corner defects	Not admissible

The Grade E1 or Grade E2 board is used according to design requirements in the actual use.

## 2. Medium density fibreboard (MDF)

### 2a. Recommended type of MDF:

The humid resistant board, the medium density fibreboard having impregnated with cold water for a short period or with the high humidity action could be used in the bathroom.

### 2b. Performance:

It is not allowed for the product to have the delamination, blister, local looseness and softness, defects at edge and corner oil dirt, carbonization etc. phenomena.

Performance	Unit	Nominal thickness range mm	
		≤19	>19
Thickness deviation	mm	±0.2	±0.3
Length and width deviation	mm	±2.0	
Diagonal deviation	mm	≤3.0	
Warp	%	≤0.8	
Edge un-straightness	mm/m	±0.5	
1. The thickness of every measuring point at each sheet of board shouldn't exceed ±0.15 of its arithmetic average value 2. When the board thickness is ≤ 6mm, the warp is not measured.			

Screw holding capability : There is the screw holding capability requirement for the board of thickness ≥15mm. The board surface's screw holding force is ≥ 1400N; that of the board edge is ≥900N.

Thickness swelling (the expansion rate of water absorbing thickness) shouldn't exceed 10%.

Limit of formaldehyde emission: Grade E1: ≤9.0 mg/100g

Grade E2 : > 9.0—30.0 mg/100g

Note: The formaldehyde releasing amount (the perforator test value) is the value measured when the specimen's moisture content is at 6.5%

The Grade E1 or Grade E2 board is used according to design requirements in the actual use.

## B. FURNITURE SPECIFICATION

The countertop and cabinet body parts should be processed according to drawings; the permissible deviation of unmarked dimensions should be executed per GB/T1804-2000 m (medium grade). The limit deviation of overall length, width and height of wood-base board cabinet body is  $\pm 2\text{mm}$ , the difference of table surface board's diagonal shouldn't exceed 3mm

It	Specimen name and specs			Permissible value (mm)		
Warp	Faceplate, front view face plate part	Diagonal length		$\leq 2.0$		
		<1400		$\leq 1.0$		
		<700		$\leq 0.5$		
Foot stability				$\leq 1.5$		
Flatness	Faceplate, front view board			$\leq 0.15$		
Adjacent sides' verticality	Faceplate	Diagonal length		$\leq 1.0$		
	Frame	Diagonal length $\geq 1000$		$\leq 1.5$		
		Diagonal length <1000		$\leq 1.0$		
Potential difference degree	Distance (not the distance required by the design) deviation			$\leq 2.0$		
	Distance (not the distance required by the design) deviation between adjacent surfaces of drawer and frame, drawer and door, drawer and drawer			$\leq 1.0$		
Seam	Open door	Inserted type	Upper, left, right seam	$\leq 1.5$		
			Middle, lower seam	$\leq 2.0$		
	Drawer	Covered type	Clearance of door back and frame plane		$\leq 2.0$	
			Inserted type	Upper, left, right seam		$\leq 2.0$
				Covered	Clearance of drawer back and frame plane	
Droop, swing	Drawer	Droop			$\leq 10.0$	
		Swing		$\leq 10.0$		

Physical and chemical requirements of furniture (excluding countertop board)			
No.	Test item	Test conditions	Technical requirements
1	Surface steam proof	Steam, (60±5) min	No protrusion,fissure,discoloring etc.on specimen surface
2	Surface dry heat resistance	(180±1) °C, 20min	Slight change in gloss and (or) color
3	Surface resistance to high-low temperature	(63 ±2) °C, 2h, (-20±3) °C, 2h, 2 cycles	No crack, blister, discoloring and wrinkling on surface
	cycle		
4	Surface resistance to cracking	70°C, 24h	Slight crack is allowed on surface when observing with 6x magnifier
5	Resistance to surface staining	A little soil bean sauce, 24h	No pollution or corrosion trace on surface
6	Surface liquid proof	10% sodium carbonate solution, 24h 30% acetic acid solution, 24h	Slight discoloring trace on surface
7	Resistance to surface wear	Paint film wear meter, 1000 rev.	Slight white-exposing is allowed locally
8	Surface anti-impact	Paint film impacter, 100mm high	Light crack is allowed, with 1-2 ring or arc cracks

Mechanics property requirements of wood-base board cabinet body:			
No.	Test	Test conditions	Technical requirements
1	Shelf bend test	Static loading 2kg/dm <sup>2</sup> , 7	No fracture or generous crack, no
		days	permanent deformation.
2	Shelf loading stability	Executed per GB/T10357.4	No turning over
3	Shelf support strength	1.7kg steel block,	No wear or deformation of shelf
4	Cabinet door installation strength test	Hang 25kg weight at	No abnormal at every part, no influence on appearance and
5	Cabinet door horizontal loading test	At 100mm from door end,	
6	Bottom board strength test	Press with 750N force for	Wear or deformation that
7	Pull door durability test	2×1.5kg, open/close 40000 times repeatedly	Door still connected closely with cabinet, no damage and looseness of door and hinge, hinge
8	Pull door strength test	35kg, 10 times	
9	Pull door sudden open test	2kg, 10 times	
10	Turnover door strength test	300N, 10 times	
11	Turnover door durability test	20000 times	
12	Roller shutter door durability test	Speed is 0.25m/s,	Door opens/closes flexibly, wear
13	Roller shutter door sudden open test	40 times	
14	Drawer & slide rail durability test	Apply 0.33kg/dm <sup>2</sup> ,	Permanent looseness no appear
15	Drawer quick open/close test	Apply 50N forcewith	
16	Drawer bottom board destructive test	Apply 60N force, 10s, 10	
17	Drawer & slide rail strength test	0.25kg/dm <sup>2</sup> distributed	
18	Main body structure & support stand	Apply 300N force at	Looseness not appear,
19	Wall cabinet horizontal impact test	Impact door's middle seam	No any looseness and damage on
20	Wall cabinet vertical impact test	Impact bottom board center	
21	Hardware for wall cabinet installation	Static loading 100kg	No looseness, crack deformation
Property requirements of wall cabinet:			
No.	Test item	Test conditions	Technical requirements
22	Wall cabinet overload test	Apply 200kg/m <sup>2</sup> on bottom plate, 100kg/m <sup>2</sup> on stand board	No damage on stand board and support parts,afteunloading, vertical deformation ≤3mm
23	Wall cabinet dropping test	Close cabinet door, drop it horizontalal from 600mm	No structural damage on wall cabinet, no looseness
24	Independent cabinet stability test	GB/T10357.4 Article 5.2	No tilting over
25	Cabinet handling test	One corner lifts to 150mm high then drops, 4 times	No deformation,looseness, decomposing etc.abnormal situations
26	Handle installing part strength test	Draw with 200N force up/ down, left/right and forth	No deformation and looseness influencing use
Note: Item 23 is not conducted for glass door cabinet test			

## 1. Wood-based board furniture

The wood-base board used should conform to stipulations of relevant standards.

The surface adhering and edge sealing treatment should be conducted for wood-base board made components' surfaces, and it should be tight, the glue dropping, left glue trace and drum bulb etc. phenomena are not allowed, the peeling strength of surface covering material should reach  $1.4 \times 1000\text{N/m}$ .

The sealed edge should be clean, without burr, cut trace, with smooth hand feeling; the transition of two vertically adjacent sides should be smooth, the faceplate shouldn't be hurt and the white edge shouldn't appear during trimming.

The glue stain, dirt trace, blister and glue dropping are not allowed on board block components' surfaces.

The ratio of shelf's deflection to the length is  $\leq 0.2\%$ .

The integrated part jointed by the wood dowel or stick tenons should be glued, the tenon and part and component integration should be firm, the gap at external integration place shouldn't be larger than 0.2mm.

The surface of membrane pressured door board should be flat, the base material's grain shouldn't be reflected on the surface, the turning corner should be clean, the edge trimming should be neat and flat and straight.

The fire protection grade of furniture's cabinet body material should conform to Grade B2 in GB8624-1997.

## 2. Paint requirement

1.The luster of the whole product or matched product should be extremely similar, the color line of color dividing places should be tidy, the unpainted part should be kept clean, the inner surface should be painted or conducted with other treatment according to design requirements.

2.The coating of external view surface (e.g. faceplate etc. places) should be flat and smooth, clear. There shouldn't be wood holes or other sinks after the paint film dried, the hand feeling should be smooth, without particles, edge expansions and any non-flatness.

3.The coating shouldn't have the crinkled skin, viscosity, paint leaving out etc. phenomena, shouldn't have obvious processing trace, scratch, fog light, white edge, white spot, flowing stay, shrinkage hole, power accumulation and any slug.

4. The requirements on physical and chemical properties of the paint film treatment should conform to relevant national standard SG279-83.

## C. COUNTERTOP

### 1. Solid surface countertop

The appearance should conform to stipulations of the table below:

No.	Defect name	Requirements	No.	Defect name	Requirements
1	Crack	Not allowed	7	Pit	Slight
2	Lack	Not allowed	8	Scratch	Not obvious
3	Crinkled skin	Not obvious	9	Repair trace	Not obvious
4	White stain	Not obvious	10	Concave	Not obvious
5	Flower stain	Slight	11	Color difference	Identical color
6	Bulb	Slight	12	Impurities	Not obvious

Physical and chemical property requirements on artificial stone:

No.	Test item	Property requirement	No.	Test item	Property requirement
1	Luster	$\geq 80$ luster unit	5	Water absorbing rate	$\leq 0.5\%$
2	Un-flatness	$\leq 4\%$	6	Glue layer thickness	(0.35-0.60) mm
3	Babbitt hardness	$\geq 40$	7	Hot water resistance	No crack, no bulb
4	Impact resistance	No crack on surface	8	Staining resistance	no obvious color change

## 2. Natural stone material countertop

The surface shouldn't have the hidden wound, weathering etc. defects, the surface should be flat, with tidy edges, the front edge angle should be chamfered, the radioactive element content should be within the State-specified extent.

The ground surface shouldn't have the sand hole of diameter exceeding 2mm. The obvious scratch is not allowed to exist on the ground surface.

There shouldn't be the obvious trace on the front surface after the marble adhering and repairing; the color should be close to the front pattern.

## D. HARDWARE FITTING

The installation of various fitting should be tight, flat, firm; the integrated place shouldn't be loosened; the lacking of parts, screwing lost, and screwed through are not allowed; various open/close parts and fittings should be flexible, used quietly.

### 1. Hinge

According to design requirements, the hinge uses the product with a certain opening angle, its cycled open/close (the cycled open/close means one complete stroke of open--close) is required to reach over one hundred thousand (100,000)times without damage.

- a) Use ability: During the open/close test, the hinge is not blocked or there is no friction sound;
- b) Adjustability: The adjustable range of up/down, left/right and back/forth is  $\pm 2\text{mm}$ ;
- c) Opening angle: The min. degree is  $95^\circ$  or to use the product with a corresponding open/close angle according to design requirements;
- d) Anti-corrosive: After 48h neutral salt spray test, the corrosion grade is no lower than Grade 9;
- e) Safety: Even the screw on the hinge is adjusted to the limit position, it wouldn't be dropped out. Mechanics properties of the hinge should conform to requirements of Item 7, 8, 9 in the Table of "Mechanics property requirements of wood-base board furniture".

### 2. Hardware for wall cabinet installation

- a) Weight bearing: Every hardware should at least bear the vertical suspending force of 500N;
- b) Regulating: The hardware should have the two-dimensional regulating function;
- c) The plastic parts on the hardware should be fire-retardant, without crack and cicatrices.

### 3. Handle

- a) The handle should be beautiful in appearance, fine in fabrication. No rust in metallic surface, no coating and plating defects in coating layer, and no burrs and sharp edges;
- b) There should be metallic pre-buried parts at screw hole of the plastic, glass, solid wooden etc. handles;
- c) The handle's installation hole distance should be the integral multiple of 32mm.

Salt bath resistance test,  $\text{PH}=7.0\pm 0.1$ , the number of stain spots and rust spots with diameter less than 1.5mm should be less than 8.

Acid bath resistance test,  $\text{PH}=3.0\pm 0.1$ , the number of stain spots and rust spots with diameter less than 1.5mm should be less than 8.

Materials used are the metallic handles (stainless steel, brass, aluminum alloy, steel etc.) plastic handle, wooden handle, and other handles e.g.: ceramic, glass etc.

### 4. Hardware connect

Surfaces of the unit assembled hardware connect, cabinet body hardware connect etc. metallic parts should be flat, smooth, without burrs and sharp edges, the concave, broken tooth etc. defects are not allowed on the thread surfaces, the plating parts should guarantee the plating quality.

The stick tenon should be made of by selecting materials of hard wood and without eaten by moth, corruption, node, crack.

### 5. Drawer slider

- a) Various hardware connects of the slider should be connected firmly, under the rated weight bearing conditions, there should be no friction sound and obvious blocking phenomena, the slider slides fluently;
- b) The slider of zinc plating, paint roasting should conform to stipulations of relevant standards;
- c) For the plastic powder spraying treated slider, the thickness of plastic spraying layer should be no less than 0.1mm;

d) The plastic slider should be made of using the fire-retardant materials.

## E. ACCESSORY

The glass of floating glass mirror fabricating grade conformed to stipulations of GB11614 standard is used as the raw material, and there are the silver, copper plating layer and paint layer at its back, the silver content in its silver layer shouldn't be less than 700mg/m<sup>2</sup>; the copper layer should cover completely the silver layer, the copper content in the copper layer shouldn't be less than 200mg/mg<sup>2</sup>; the paint layer is used for protecting the silver layer and copper layer, the thickness of paint layer shouldn't be less than 40μm. The shearing strength between the plating layer and the coating layer and between the plating layer and the glass should be no less than 15N/cm<sup>2</sup>. After the resistance wet heat test, the reflecting plating layer of the sample after the test shouldn't have any obvious change, the protective coating layer shouldn't have the drum bulb or the separating phenomenon.

After the neutral salt spray resistance test, the sample's reflecting layer is allowed to have 4 change spots with diameter of d≤0.3mm and 2 protective coating layer change spots with diameter of d≤2.5mm, the max. extension of the edge coating loss toward inside should be no larger than 3.5mm.

The visible light reflecting rate of the silver mirror should be no less than 85%. For colored silver mirrors, the visible light reflecting rate should be no less than 75%, or determined by the negotiation of both parties of the supplier and demander.

The thickness difference of same glass slice, for thickness 2mm, 3mm, 4mm, it is 0.25mm, for thickness 5mm, 6mm, 8mm, 10mm, it is 0.35mm.

Thickness (mm)	Permissible deviation (mm)
2, 3, 4	±0.25
5, 6	±0.30
8, 10	±0.40

Permissible deviation for rectangular fixed dimensions:

Thickness (mm)	Permissible deviation (mm)	
	≤1500	>1500
2, 3, 4, 5, 6	±3	±4
8, 10	±4	±5

The diagonal difference of the silver mirror shouldn't be larger than 0.2% of the diagonal average length.

The appearance quality of the silver mirror should conform to stipulations of following table.

Other items e.g. the bulb, impurities, optical deformation, line path, section defects etc. are executed per Article 4.5 stipulations of appearance quality for floating glass of mirror fabricating grade in GB11614.

The appearance quality of 4mm、8mm、10mm lens should be executed per user's requirement or solved by negotiation of both parties.

Defect name	Quality requirement
Scratch	long<30mm , wide≤0.1mm , ,2 strip/m <sup>2</sup> silver mirror wide>0.1mm , not allowed
Moldy stain	Shouldn't be seen by naked eyes
Flaw	Diameter is 0.2~0.3mm, 2 strip/m <sup>2</sup> silver mirror, d ≥0.4mm, not allowed

For above testing items, the testing should be conducted according to testing methods of relevant national standards.

Glass (stand board or door board)

The crack, lacking of, air bulb, scratch, sand particle, knot and pock etc. defects are not allowed. The peripheral of glass should be treated with edge grinding, the glass thickness shouldn't be less than 5mm, and the thickness should be uniform, the connection of the glass with the cabinet should be firm and reliable.

### 3. Support

#### 1. Plating parts

The plating layer of plating parts should be uniform, without the pock, skin peeling off, white fog, yellow flooding, black stain, burning, bottom exposing, chap, rust etc. defects. The external surface's luster should be uniform, the polished surface should be smooth, without obvious burrs, scratch and collision hurt etc.

#### 2. Welding parts

The welding component should be firm, with uniform welded seams, the integrated parts should have no splashing and not welded thoroughly, crack etc. defects. The rotary basket, pull basket etc. net basket products should have flat surface after the shaping, no welding deformation, uniform wire space, ends of equal height, no burr and sharp edges.

#### 3. Spraying coated parts

The surface texture should be fine, the coating layer is firm, smooth and uniform with identical luster. The flowing trace, bottom exposing, wrinkling and dropping off etc. defects are not allowed.

#### 4. Alloy metallic parts

The surface should be smooth, flat, fine, and have no crack, skin rising, corrosive stain, oxide film dropping off, burr, black stain and uneven coloring etc. defects. Air bulbs, pressing pot, collision hurt and scratch are not allowed on the decoration surface.

#### 5. Plastic parts

The product surface should be smooth, fine, flat, no defects such as air bulbs, crack, stain trace, scratch, concave, shrink hole, color stacking and uneven luster, color changing line etc., with uniform and identical color and in accord with the drawing stipulations.

## F. PACKAGING,STORAGE, TRANSPORTATION.

### 1. Product operation instructions

- a) Operation methods and cautions and predictable use error instructions, repair and liaison places etc. instructions;
- b) Installation instructions: e.g. safety measures, installation requirements;
- c) Maintenance and upkeeping etc.: e.g. cleaning, repair, upkeeping etc.

The packaging case should have designations conforming to stipulations of GB191—2000 such as "rain proof", "limit stacking layers" etc.

### 2. Packaging

The cabinet should be conducted with the packaging according to the placing place and layer specified by the packaging drawings, PS film is used for separating between every layer of board, the packaging fillings are filled in up/down, back/forth and left/right of the packaging case, the filling parts are used for supplementing gaps of each layer.

The packaging part and filling part are fabricated with PS foaming fabrication (density should be  $\geq 25\text{kg/m}^3$ ), The fabricated part should be foamed uniformly, without the texture loosening, particle dropping off etc. phenomena, and the surface should be smooth and flat.

The casing must be qualified by the inspection, and attached with the packing list signed by the goods preparing personnel and inspector, then it could be sealed and packed.

The packaging measures should ensure that the cabinet product are not damaged due to the turning upside

down, loading and unloading,

### 3. Storage

The product should be kept dry, ventilated, prevented from the pollution and far away form the fire source during the storage period, the number of stacking layers shouldn't exceed the limit, for preventing the press damage, the cabinet's door board and countertop shouldn't be damaged by the extrusion.

### 4. Transportation

The product should prevent the exposure shining, avoid the rain and snow invasion during the transportation.

The product transportation should avoid the collision, for preventing the damage.