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Components for kitchen equipment

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Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Association of Kitchen and Bath/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS A 4420**:2005 is replaced with this Standard.

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Components for kitchen equipment

Introduction

This Japanese Industrial Standard was established in 1981 and has gone through five revisions up to the present. The last revision was made in 2005, and the revision at this time is to respond to the diversification in specifications, structures and materials of the products.

No corresponding International Standard has been established at this point. The comparison table between previous and current editions of this Standard on technically significant revisions is given in Annex B.

1 Scope

This Standard specifies the components for kitchen equipment used mainly for residence (hereafter referred to as components).

NOTE The components include a floor unit, wall unit, tall unit, work top, sink and trap.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- JIS A 0017 *Kitchen equipment—Coordinating sizes*
- JIS A 5536 *Adhesives for resilient, textile and laminate floor coverings*
- JIS A 5549 *Adhesives for fixture*
- JIS A 5905 *Fiberboards*
- JIS A 5908 *Particleboards*
- JIS B 1501 *Rolling bearings—Balls*
- JIS G 3133 *Decarburized steel sheet and strip for porcelain enamelling*
- JIS G 3141 *Cold-reduced carbon steel sheet and strip*
- JIS G 3302 *Hot-dip zinc-coated steel sheet and strip*
- JIS G 3313 *Electrolytic zinc-coated steel sheet and strip*
- JIS G 3444 *Carbon steel tubes for general structure*
- JIS G 3532 *Low carbon steel wires*
- JIS G 4305 *Cold-rolled stainless steel plate, sheet and strip*
- JIS G 4309 *Stainless steel wires*
- JIS G 5501 *Grey iron castings*
- JIS H 3250 *Copper and copper alloy rods and bars*
- JIS H 4000 *Aluminium and aluminium alloy sheets, strips and plates*
- JIS H 4001 *Painted and baked aluminium and aluminium alloy sheets and strips*

- JIS H 4100 *Aluminium and aluminium alloy extruded profiles*
- JIS H 5202 *Aluminium alloy castings*
- JIS H 5301 *Zinc alloys die castings*
- JIS H 8601 *Anodic oxide coatings on aluminium and aluminium alloys*
- JIS H 8610 *Electroplated coatings of zinc on iron or steel*
- JIS H 8617 *Electroplated coatings of nickel and chromium*
- JIS H 8641 *Hot dip galvanized coatings*
- JIS K 5531 *Nitrocellulose lacquer*
- JIS K 5600-5-4 *Testing methods for paints—Part 5: Mechanical property of film—Section 4: Scratch hardness (Pencil method)*
- JIS K 5600-5-6 *Testing methods for paints—Part 5: Mechanical property of film—Section 6: Adhesion test (Cross-cut test)*
- JIS K 5600-6-1 *Testing methods for paints—Part 6: Chemical property of film—Section 1: Resistance to liquids (General methods)*
- JIS K 5961 *Household varnish for interior wooden floor*
- JIS K 5962 *Household paint for wood and metal*
- JIS K 6718-1 *Plastics—Poly(methyl methacrylate) sheets—Types, dimensions and characteristics—Part 1: Cast sheets*
- JIS K 6718-2 *Plastics—Poly(methyl methacrylate) sheets—Types, dimensions and characteristics—Part 2: Extruded sheets*
- JIS K 6902 *Testing method for laminated thermosetting high-pressure decorative sheets*
- JIS K 6903 *Laminated thermosetting high-pressure decorative sheets*
- JIS K 6919 *Liquid unsaturated polyester resins for fiber reinforced plastics*
- JIS R 4301 *Vitreous and porcelain enamels—Quality test methods of enamelled products*
- JIS Z 2371 *Methods of salt spray testing*
- JIS Z 8703 *Standard atmospheric conditions for testing*
- Japan Agricultural Standards for sawn lumber
- Japan Agricultural Standards for plywood
- Japan Agricultural Standards for glued laminated timber
- Japan Agricultural Standards for laminated veneer lumber

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions apply.

3.1

floor unit

unit under the work top placed on the floor

NOTE A unit means a floor unit, wall unit or tall unit, having a box space intended for the storage or the set-up of appliances.

3.2

wall unit

unit mounted on a wall or a ceiling

3.3

tall unit

unit placed on the floor, of which the top face is higher than the work top

3.4

work top

member consisting of the cooking top and the like

3.5

sink

container of water supply for cooking

3.6

trap

discharge device to prevent the movement of odour, hygiene pests, etc. in a drain pipe by water seal

3.7

appliance

general term for heater, refrigerator, dishwasher, faucet, fan, etc.

3.8

damper mechanism

buffering mechanism to operate a part slowly

3.9

latch

mechanism for maintaining or pulling a part to a predetermined position

3.10

flap

door which opens up/down or downward by a hinge attached horizontally

3.11

friction stay

retainer to hold a flap or a door at the position where it is opened

3.12

roll door

door movable along a curved face, which is composed of slats, etc.

3.13

runner

rail for the smooth take in/out of drawer and for the prevention of drawer rolling

4 Quality

4.1 Appearance

The appearance shall be as follows.

- a) There shall be no defects such as scratches, deformation, cracks and burrs, detrimental to service.
- b) There shall be no defects such as unevenness in glossiness and hue, undulation, sag and pinhole detrimental to design.

4.2 Performances

The components shall conform to the requirements in Table 1, when tested according to Clause 8.

Table 1 Performances

Item	Performance	Test method
Strength of shelf-board support	No damage and deformation detrimental to service.	8.2
Strength of shelf board	No damage and deformation detrimental to service and 1 % or under in maximum displacement.	8.3
Strength of work top and unit bottom	No damage and deformation detrimental to service.	8.4
Vertical load on door	No damage and deformation detrimental to service.	8.5
Horizontal load on door	No damage and deformation detrimental to service.	8.6
Durability of door	No damage and deformation detrimental to service.	8.7
Quick open/close of sliding door	No damage and deformation detrimental to service.	8.8
Durability of sliding door and horizontal roll door	No damage and deformation detrimental to service.	8.9
Strength of flap	No damage and deformation detrimental to service.	8.10
Durability of flap	No damage and deformation detrimental to service.	8.11
Quick open/close of vertical roll door	No damage and deformation detrimental to service.	8.12
Durability of vertical roll door	No damage and deformation detrimental to service.	8.13
Strength of drawer and runner	No damage and deformation detrimental to service.	8.14
Durability of drawer and runner	No damage and deformation detrimental to service.	8.15
Quick open/close of drawer	No damage and deformation detrimental to service.	8.16
Run-off of bottom board of drawer	No damage and deformation detrimental to service.	8.17
Strength of handle mount part	No damage and deformation detrimental to service.	8.18
Strength of structure and frame	No damage, remarkable deformation, and damage and loosening of joint at each part	8.19

Table 1 (concluded)

Item		Performance	Test method
Mount strength of wall unit		No abnormalities, and no deformation, looseness and wobble detrimental to service.	8.20
Property of sink filled with water		No water leakage and remarkable deformation.	8.21
Discharge property of sink		Capable of discharging within 60 s.	8.22
Resistance to impact on work top		No damage and deformation detrimental to service.	8.23
Resistance to heat on work top		Rating 5 (no visible change) specified in 8.2 of JIS K 6902 .	8.24
Temperature rise in space of unit adjacent to appliance		Appliance-side inside temperature of cabinet adjacent to appliance is not higher than room temperature + 20 °C.	8.25
Energized operation ^{a) b)}		Each electric function operates normally, and no abnormalities detrimental to service, such as noise, vibration and temperature rise.	8.26
Insulation property ^{a) b)}	Insulation resistance	1 MΩ or more	8.27
	Dielectric strength	No abnormalities.	8.28
Notes ^{a)} For units equipped with electric circuits or units incorporating an electric appliance capable of working by itself, such as a lighting and an outlet socket. ^{b)} Appliances are excluded.			

5 Construction and arrangement

5.1 Construction

The construction shall be as follows.

- The components shall have a stable construction after installation.
- The work top shall be such that the waterproofness to surrounding wall and floor is provided against the water splash and water seepage from a sink and a faucet, and the water dripping from the cooking top.
- The treatment preventing drips due to dewing shall be performed on a sink. The construction shall be so that a drain pipe including a trap connected to the sink is detachable, and the discharge detrimental to service does not remain.
- The outlet of discharge from a sink shall be connected to the upstream side of a trap.
- A unit or a sink is unlikely to generate resonance, vibration, noise, etc. due to the vibration caused by an appliance.
- The components shall be such that cleaning, disassembling, replacement, repair, etc. are easy.
- The storage part of unit shall be such that dust, insects, etc. cannot invade.
- The movable parts of unit shall be so as not to come out easily using a stopper or the like.