

Australian/New Zealand Standard®

Domestic kitchen assemblies—Methods of test

Method 4: Determination of the strength of worktops and bottom surfaces

1 SCOPE This Standard sets out the procedure for determining the strength of worktops and bottom surfaces of kitchen units.

2 PRINCIPLE The storage parts of the unit to be tested are fully loaded with weights and a load is applied to the worktop or bottom surface to determine the strength of that component.

3 APPARATUS The following apparatus is required:

- (a) *Weights*—to provide a load that will not reinforce the unit or redistribute the load, e.g. metal bars or lead shot in bags.

NOTE: If metal bars are used the front row shall be aligned with the front edge of the surface. If lead shot in bags is used, the bags should be divided into small compartments to prevent the contents moving during testing.

- (b) *Means of applying a force*—1000 N.

- (c) *Loading pad*—75 mm × 75 mm having a smooth hard surface and a 5 mm edge radius.

4 PROCEDURE The procedure is as follows:

- (a) Load all the storage parts of the units with the appropriate mass as specified in Table 1.

- (b) Select the position on the worktop or bottom surface most likely to fail.

NOTE: If there are several such positions select up to a maximum of three positions.

- (c) Place the loading pad on the selected position(s) and vertically apply a 1000 N force, 10 times.

- (d) A unit or component shall record a pass if, at the completion of the test, none of the following defects affects the strength or function of the unit or component:

- (i) Fracturing of any member, joint or component.
- (ii) Any loosening of joints intended to be rigid.
- (iii) Deformation or wear of any component.
- (iv) Loosening of any components fixed to the unit.

TABLE 1
LOADS APPLIED TO PARTS OTHER
THAN THE PART BEING TESTED

Part	Load	
	kg/m ²	kg/m ³
Wall unit shelf Floor unit shelf Pantry shelf	66	—
Cutlery drawer	—	330
All other drawers Basket	—	250

NOTES:

- 1 The area of shelves is calculated by including any space between the back of the shelf and the inside face of the back panel or, where no back panel is fitted, the rear edge of the end panel of the unit.
- 2 Where there are part-width shelves, the load applicable to the area between the front of the shelf and the inside surface of the door should be transferred to the same area of the full-width horizontal surface immediately below.
- 3 Internal volume is equal to the area of drawer bottom times the maximum height free of obstruction.

5 TEST REPORT The following shall be reported.

- (a) Reference to this Joint Australian/New Zealand Standard (i.e. AS/NZS 4387.4).
- (b) A detailed description of the unit or component tested, including the manufacturer's product reference.
- (c) The method of test and the test level to which the unit or component has been tested.
- (d) Details of any defects observed before the test.
- (e) Details of any defects observed after the test affecting the strength or function of the unit or component, for example—
 - (i) fracturing of any member, joint or component;
 - (ii) permanent loosening of joints intended to be rigid, shown by hand pressure applied to suitable members;
 - (iii) deformation or wear of any component that will essentially affect its function;
 - (iv) loosening of any means of fixing components to the articles;
 - (v) moveable parts that do not open or close freely, or catches that do not operate smoothly; or
 - (vi) any other damage that may cause damage or snag clothing.
- (f) If required, the magnitude of any non-standard forces used.
- (g) Details of any deviation from the test procedure.