

Domestic kitchen equipment —

**Part 5: Specification for strength
requirements and methods of test for
peninsular units, island units and
breakfast bars**

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- Association of Building Engineers
- Association of Consulting Scientists
- Association of Manufacturers of Domestic Electrical Appliances
- British Coatings Federation Ltd.
- British Furniture Manufacturers' Federation
- British Laminated Plastics Fabricators' Association Ltd.
- British Woodworking Federation
- Department of Trade and Industry (Consumer Safety Unit)
- Furniture Industry Research Association
- Kitchen Specialists' Association
- LHC Building Components and Services
- Metal Sink Manufacturers' Association
- National Federation of Housing Associations
- Society of British Gas Industries

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Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
Introduction	1
1 Scope	1
2 References	1
3 Definitions	1
4 Grades	2
5 Range of assemblies and worktops	2
6 Performance	2
7 Marking and claims of conformance	3
8 Samples for tests	3
9 General requirements for tests	3
10 Test report	5
Annex A (normative) Principle of testing	6
Annex B (normative) Tests on assembled peninsular and island units	6
Annex C (normative) Tests on breakfast bars	11
Figure B.1 — Strength of assemblies by the pivoted door test	6
Figure B.2 — Horizontal static load test on peninsular units and breakfast bars	7
Figure B.3 — Horizontal impact device	9
Figure B.4 — Horizontal fatigue test on peninsular units and breakfast bars	10
Figure B.5 — Vertical door fatigue test	11
Table 1 — Summary of tests (all units)	2
Table 2 — Summary of tests (overhead units)	2
Table 3 — Summary of tests (breakfast bars)	2
Table 4 — Loads applied to parts other than the part being tested	4
List of references	Inside back cover

Foreword

This Part of BS 6222 has been prepared by Technical Committee CCM/49. It specifies strength requirements for peninsular units, island units and breakfast bars to withstand the maximum loadings specified for general domestic use with higher test levels specified for heavy domestic use. It is recognized that accidental overloads occur from time to time but it would be impracticable to specify requirements for assemblies to withstand such accidents.

The tests are designed to be applied to a peninsular unit, island unit or breakfast bar that is fully assembled and ready for use.

Safety requirements are omitted from this Part of BS 6222 as they will be specified in EN 1153 *Kitchen furniture — Safety requirements and test methods for built-in and free standing kitchen cabinets and work tops*, which is in preparation.

Other Parts of BS 6222 are as follows:

- *Part 1: Specification for coordinating dimensions;*
- *Part 2: Specification for strength requirements and methods of test for fitted kitchen units;*
- *Part 3: Specification for performance requirements for durability of surface finish and adhesion of surfacing and edging materials;*
- *Part 4: Code of practice for protection, storage and installation of fitted kitchen units.*

NOTE Attention is drawn to BS 7376 and BS 7749.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing product surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS EN ISO 9000.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 12, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Introduction

This Part of BS 6222 specifies requirements for peninsular units, island units and breakfast bars which are intended to be capable of passing a number of tests without significant damage. Many of the tests specified in this Part of BS 6222 are identical to those specified in BS 6222-2. It is emphasized that the purpose of this Part of BS 6222 is to specify strength requirements for complete peninsular, island and breakfast bar assemblies. BS 6222-2, whilst containing the same tests, is applicable to individual units or components. Two grades are specified.

The tests are for the repeated operation of doors, for the loading of storage surfaces and for the exceptional loads that should occur only occasionally.

Tests carried out in accordance with this standard are intended to demonstrate the ability of the item to give satisfactory service in its intended environment. It should be understood that such tests do not ensure that structural failure will not eventually occur as a result of habitual misuse or after an excessively long period of service.

1 Scope

This Part of BS 6222 specifies strength requirements and methods of test for assembled peninsular units, island units and breakfast bars but does not specify safety requirements.

This Part of BS 6222 does not specify requirements for individual units which are covered by BS 6222-2. The requirements are applicable to all materials and all types of construction.

The tests do not take account of the effects of ageing or chemical degradation.

2 References

2.1 Normative reference

This British Standard incorporates, by dated or undated reference, provisions from another publication. This normative reference is made at the appropriate place in the text and the cited publication is listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to, or revisions of the cited publication apply to this British Standard only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

2.2 Informative references

This British Standard refers to other publications that provide information or guidance. Editions of these publications current at the time of issue of this standard are listed on the inside back cover, but reference should be made to the latest editions.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1

breakfast bar

a horizontal surface that is attached to one or more base units and that is at a height convenient for use by a seated person

3.2

island unit

an assembly of units attached to the structure of the building only at the floor

3.3

peninsular unit

an assembly of units in which not more than one base unit and one overhead unit are attached to the structure of the building

3.4

shelf

continuous horizontal surface intended for storage

3.5

door

a panel structure hinged in the vertical plane or sliding in the vertical plane

3.6

worktop

panel, usually of a wood based material, which may be shaped, complete with any surface finish, to be fixed at the normal working height

3.7

performance

ability of an assembly to withstand working loads over its service life

3.8

strength

ability of an assembly to withstand loads

3.9

rigidity

ability of an assembly to resist deflection under applied load

3.10 deflection

distance through which a specified point moves during or as a result of a test procedure

4 Grades

Assemblies shall be classified as either grade G (general domestic) or grade H (heavy domestic). Grade G is applicable to general domestic situations where users are expected to exercise care. Grade H units are for locations where heavy use is foreseen or where the users are liable to fail to exercise care.

5 Range of assemblies and worktops

For a range of assemblies to be described as conforming to grade G or grade H, all of the parts of the range shall conform to the same grade, i.e. grade G or grade H, as appropriate.

If a range of assemblies is to be tested the following assemblies shall be submitted for test:

- the longest peninsular unit;
- the breakfast bar with the longest span;
- the breakfast bar with the greatest cantilevered projection;
- the longest peninsular unit that is attached only to a wall;
- the worktop with the greatest cantilevered projection;

- the overhead unit door whose geometry creates the greatest bending moment on the hinge.

6 Performance

6.1 General

Individual units within peninsular and island units and breakfast bars shall conform to BS 6222-2.

When tested in accordance with Annex B and Annex C none of the following defects shall affect the strength or function of the unit or component:

- a fracture of any member, joint or component;
- any loosening of joints intended to be rigid;
- deformation or wear of any component;
- loosening of any components.

6.2 Components

6.2.1 Peninsular and island units shall be tested by the methods given in Annex B and breakfast bars by the methods given in Annex C to the test levels of either grade G or grade H given in Table 1, Table 2 and Table 3 and shall conform to **6.1**.

When tested in accordance with **B.3**, at the appropriate grade, shelves and the bottoms and tops of assemblies shall not deflect by greater than span/200 for particle board, span/150 for wood or span/100 for other materials.

6.2.2 When tested in accordance with **B.1**, to the test levels specified for grade G or grade H in Table 2, pivoted doors on overhead units shall conform to **6.1**.

Table 1 — Summary of tests (all units)

Test	Description and units	Test level		Method of test (see annexes)
		G	H	
Horizontal static load	Force (N)	450	600	B.3
Horizontal impact	Drop height (mm)	40	40	B.4
Horizontal fatigue	Force (N)	150	150	B.5
	Cycles	15 000	30 000	

Table 2 — Summary of tests (overhead units)

Component and test	Description and units	Test level		Method of test (see annexes)
		G	H	
Strength of assemblies	Mass (kg)	30	37.5	B.1
— pivoted door test	Load (kg/dm ²)	1.5	1.75	B.2
— shelf deflection test				
Vertical door fatigue	Force (N)	100	150	B.6
	Cycles	5 000	5 000	

Table 3 — Summary of tests (breakfast bars)

Component and test	Description and units	Test level		Method of test (see annexes)
		G	H	
Vertical fatigue on worktops and breakfast bars	Force (N)	300	300	C.4
	Cycles	15 000	30 000	