

BS 559:2009



BSI Standards Publication

Specification for the design and construction of signs for publicity, decorative and general purposes

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 20, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI and came into effect on 31 August 2009. It was prepared by Technical Committee CPL/34, *Lamps and related equipment*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 559:1998, which is withdrawn.

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- requirements for the calculation of resistance to wind pressures (6.2.1);
- requirements for foundations for fixed free standing signs (6.2.2);
- protection against corrosion (6.2.4) and protection from damage by birds and rodents (6.2.5);
- requirements for LEDs (7.2);
- guidance on working with vinyl films (Annex A).

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

1 Scope

This British Standard specifies requirements for the design and construction of signs for publicity, decorative or general purposes, at internal or external locations. It is applicable to illuminated and non-illuminated signs, fixed or portable.

This standard is not applicable to road traffic signs, safety signs or fire safety signs.

NOTE Other standards are available for road traffic signs (e.g. BS 8442 and BS EN 12899) and safety signs, including fire safety signs (e.g. BS 5499).

Guidance on working with vinyl films is given in Annex A.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 476-7:1997, *Fire tests on building materials and structures – Part 7: Method of test to determine the classification of the surface spread of flame of products*

BS 4533-102.1, *Luminaires – Part 102: Particular requirements – Section 102.1: Specification for fixed general purpose luminaires*

BS 5950-1:2000, *Structural use of steelwork in building – Part 1: Code of practice for design – Rolled and welded sections*¹⁾

BS 6206, *Specification for impact performance requirements for flat safety glass and safety plastics for use in buildings*

BS 6262, *Code of practice for glazing for buildings*²⁾

BS 6496, *Specification for powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions, sheet and preformed sections coated with powder organic coatings*

BS 7671, *Requirements for electrical installations – IEE Wiring Regulations*

BS 8004, *Code of practice for foundations*

BS 8417, *Preservation of timber – Recommendations*

BS EN 1090-2:2008, *Execution of steel structures and aluminium structures – Part 2: Technical requirements for the execution of steel structures*

BS EN 1396, *Aluminium and aluminium alloys – Coil coated sheet and strip for general applications – Specifications*

BS EN 1991-1-4, *Eurocode 1 – Actions on structures – Part 1-4: General actions – Wind actions* (including the National Annex)

¹⁾ It is anticipated that BS 5950-1 will be withdrawn in due course. Up to date information can be obtained from BSI Customer Services.

²⁾ It is anticipated that BS 6262 will be withdrawn on publication of BS 6262 Parts 1–7.

BS EN 12373-1, *Aluminium and aluminium alloys – Anodizing – Part 1: Method for specifying decorative and protective anodic oxidation coatings on aluminium*

BS EN 13438, *Paints and varnishes – Powder organic coatings for galvanized or sherardised steel products for construction purposes*

BS EN 50107-1, *Signs and luminous-discharge-tube installations operating from a no-load rated output voltage exceeding 1 kV but not exceeding 10 kV – Part 1: General requirements*

BS EN 60529:1992, *Specification for degrees of protection provided by enclosures (IP code)*

BS EN 60598-1, *Luminaires – Part 1: General requirements and tests*

BS EN 60598-2-4, *Luminaires – Part 2: Particular requirements – Section 2.4: Portable general purpose luminaires*

BS EN 60598-2-5, *Luminaires – Part 2-5: Particular requirements – Floodlights*

BS EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods*

3 Terms and definitions

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

3.1 signs

3.1.1 sign

word, letter, model, emblem, border, outline, box, device, representation, announcement or direction, fixed or free standing, including a framework together, where necessary, with a means of attachment to a building or supporting structure

3.1.2 illuminated sign

sign with means of illumination, such means being either an integral part of the sign or external to the sign

NOTE 1 External illumination might be in the form of floodlighting luminaires.

NOTE 2 Integral illumination might consist of light sources within the sign, providing back illumination of a translucent (or transparent) face carrying the sign message; or might consist of light sources fixed to the sign face and comprising an integral part of the message.

3.1.3 sign installation

sign consisting of many separate parts and intended to be assembled and wired at the installation site

3.1.4 self-contained sign

sign, usually small, in which the housing, legend, means of illumination and wiring are supplied as a complete unit requiring merely to be connected to a mains supply

NOTE A self-contained sign might be portable or might be intended to be permanently fixed to its mounting surface.

3.1.5 portable sign

small self-contained sign which is supplied as a complete unit and is intended to be placed in position and, if illuminated, connected to a mains supply, usually by unskilled personnel

NOTE A portable illuminated sign is usually supplied with an integral lead for connecting to the mains supply and this often includes a mains plug.

3.2 parts of signs**3.2.1 backing panel**

part behind a sign or fitting which might also act as a means of support

3.2.2 face panel

part of the sign which usually contains the message, and is directed towards the observer

3.3 illuminated signs**3.3.1 low voltage**

nominal voltage normally exceeding extra-low voltage but not exceeding 1 000 V a.c. or 1 500 V d.c. between conductors, or 600 V a.c. or 900 V d.c. between conductors and earth

3.3.2 luminaire

equipment which distributes, filters, or transforms the light from one or more tubes, and which includes any parts necessary for supporting, fixing and protecting the tubes, but not the tubes themselves, and, where necessary, circuit auxiliaries together with the means for connecting them to the supply

3.3.3 light-emitting diode (LED)

solid state device embodying a p-n junction, emitting optical radiation when excited by an electric current

[IEC 60050-845:1987 and BS EN 62031:2008, 3.1]

3.3.4 LED module

unit containing one or more LEDs supplied as a light source

NOTE In addition to one or more LEDs, it might contain further components, e.g. optical, mechanical, electrical and electronic, but excluding the control gear.

[BS EN 62031:2008, 3.2, modified]

3.3.5 cold cathode

lamp electrode operating by field emission

3.3.6 hot cathode

lamp electrode operating by thermionic emission

3.4 materials**3.4.1 plastic materials**

polymeric materials

3.4.2 flexible plastic

plastic material which is essentially flexible and requires a tensioning system when used in a sign face

3.4.3 rigid plastic

plastic material which is essentially rigid and does not require a tensioning system when used as a sign face

3.4.4 aluminium composite material (ACM)

sheet material comprising an aluminium skin or skins on a rigid or semi-rigid core of a different material

NOTE ACM is typically a polyethylene core with a laminated pre-coated aluminium skin on each face.

4 Service life

The service life of the sign shall be either:

- a) as specified by the purchaser on the order; or
- b) as agreed between the purchaser and the manufacturer; or
- c) as specified by the manufacturer to the purchaser; or
- d) if not specified or agreed in accordance with a), b) or c), 10 years.

5 Sign materials**5.1 General**

Materials used in the construction of a sign shall meet the minimum requirements of the service life of the sign (see Clause 4).

NOTE Due to the large number of types of vinyl graphics materials, substrates, manufacturers and application methods, it is impractical to give precise requirements. Guidance on working with vinyl films is given in Annex A.

The materials of construction shall conform to BS 476-7 for surface spread of flame.

In addition, signs for petrol filling stations shall conform to Table 1 or to the purchaser's specification.

Table 1 Surface spread of flame for signs on petrol filling stations

Sign type	BS 476-7:1997 Minimum class	Remarks
Canopy cladding	3	All edges of plastic materials protected by metal trims
Light units	3	Positioned to prevent spread of flame from one another
Light boxes above dispensers	3	Small, isolated from the dispensing equipment and positioned so as to prevent spread of flame from one another. All edges of plastic materials protected by metal trims
Column cladding	1	When forming part of dispensing equipment
Pole and price signs	3	Standing apart from the canopy

NOTE See the Association of petroleum and explosives administration (APEA) and the Energy Institute (EI) publication [1], Section 12 "Canopies and Buildings".