

Fireguards for fires and heating appliances for domestic use — Specification

ICS 13.220.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee CW/24, Fireguards, upon which the following bodies were represented:

- Baby Products Association
- Child Accident Prevention Trust
- Consumer Policy Committee of BSI
- DTI — Consumer Safety Unit
- HETAS Ltd
- METCOM
- National Fireplace Manufacturer’s Association
- Oil Appliances Manufacturer’s Association

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Foreword

This British Standard has been prepared by Technical Committee CW/24 and is a revision of both BS 6778:1986 and BS 6539:1984 which are withdrawn.

Many different sizes and shapes of heating appliances are in use at the present time and fireguards designed for use with a particular appliance should be both effective in giving protection and convenient in use. The requirements specified in this standard are intended to be comprehensive in these respects.

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 does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 19 and a back cover.

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1 Scope

This British Standard specifies the requirements and methods of test for the construction and fitting of fireguards intended for use with heating appliances utilizing organic fuel (e.g. gas, solid fuel, oil etc.) or electricity, and which can be situated in an open area or against or on a wall, or within a recess.

Such appliances can be permanently fixed in position or can be moveable, and can incorporate open fires including combination grates, or closed fires, including room heaters and stoves.

This standard is intended to protect people from falling into a fire, prevent burns and reduce the risk of injury, particularly to young children and the infirm. In addition it will reduce the risk of fire resulting from clothing and/or other flammable materials coming into contact with, or in proximity to, burning fuel and/or hot surfaces.

The fireguards specified are not intended to reduce the risk of fires caused by flying particles which are covered by BS 3248.

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 EN 71-1:2001, *Safety of toys — Part 1: Mechanical and physical properties*.

BS EN 71-3, *Safety of toys — Part 3: Specification for migration of certain elements*.

BS EN 60454-2, *Specifications for pressure-sensitive adhesive tapes for electrical purposes — Part 2: Methods of test*. (IEC 60454-2:1994)

BS EN ISO 2409, *Paints and varnishes — Cross-cut test*. (BS 3900-E6)

BS EN ISO 3248, *Paints and varnishes — Determination of the effect of heat*. (BS 3900-G7)

3 Terms and definitions

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

3.1

heating appliance

item of equipment utilizing the energy of organic fuel(s) or electricity to provide domestic heating facilities, including an open fire burning within a fireplace

3.2

fireguard

item intended to guard fires and heating appliances, for use in the domestic environment

3.3

moveable fireguard

fireguard for use with portable heating appliances, which can be moved from place to place

NOTE See Figure 2.

3.4

permanently fixed fireguard

fireguard which is intended to be permanently fixed to a wall, for use with a heating appliance that is situated on the floor, a hearth or within a recess, and against or near to a wall of a flue system and/or against or near to a wall at a point of fuel supply

NOTE See Figure 3.

3.5**detachable fireguard**

fireguard which is intended to be detachable from a wall, for use with a heating appliance that is situated on the floor, a hearth or within a recess, and against or near to a wall of a flue system and/or against a wall at a point of fuel supply

NOTE See Figure 4.

4 Tolerances

For test apparatus unless stated otherwise, all forces, masses and dimensions shall have tolerances as follows:

- a) forces shall have an accuracy of $\pm 5\%$;
- b) masses an accuracy of $\pm 0.5\%$;
- c) dimensions an accuracy of $\pm 0.5\text{ mm}$;
- d) angles shall have an accuracy of $\pm 2^\circ$.

5 Construction**5.1 Requirements for all types of fireguard**

5.1.1 All accessible edges, points and wires shall be free from burrs and shall be not sharp when tested in accordance with the method specified in BS EN 71-1:2001, **8.11**.

5.1.2 The total area of solid material of the fireguard shall be not more than 20 % of the total area of the complete fireguard so that the effective radiation of an appliance is not unduly reduced.

5.1.3 The aperture of mesh shall be not greater than 26 mm wide and not greater than 56 mm high.

5.1.4 All surfaces of the fireguard, with the exception of the top surface, shall have a continuous vertical band of at least 600 mm.

5.1.5 The dimensions of the fireguard shall be suitable for the heating appliance(s) for which it is claimed to be intended (see Clause 7). The dimensions shall be such that no part of the fireguard, when affixed in accordance with the manufacturer's instructions (see Clause 8), is closer than 300 mm to exposed burning fuel, heated elements or radiants.

5.1.6 Openable area(s), shall be secured by not less than two locking or fastening mechanisms which shall either:

- a) require a force of at least 60 N to release them; or
- b) require at least two consecutive actions to release the mechanisms, with the second action being dependent on the first having been carried out and maintained.

5.1.7 A top shall be provided across the full width of the fireguard. The depth of the top shall be not less than 250 mm from the front surface, measured horizontally.

5.1.8 To avoid shearing or crushing during the relative movement of hinged sections and moving panels the following shall apply:

- a) when the fireguard has been deployed for use, there shall be no gaps greater than 5 mm and less than 12 mm between the parallel edges of adjacent or overlapping panels;
- b) during the setting up or folding away of the fireguard, gaps between 5 mm and 12 mm are permitted between hinged sections and moving sections providing the edges and ends conform to **5.1.1**.

5.2 Moveable fireguards for portable appliances

NOTE See Figure 2.

The fireguard shall not require direct attachment to the heating appliance and the instructed method(s) of attachment (see Clause 8) shall not require any modification to be made to the appliance.

If the fireguard is fitted with castors or wheels these shall be lockable. The locks shall not become unlocked with tested in accordance with Annex D.

5.3 Permanently fixed fireguards

NOTE See Figure 3.

The fireguard shall incorporate a means for permanent attachment to a wall or to the floor (see Clause 8).

The fireguard shall not require direct attachment to the heating appliance and the instructed method(s) of attachment (see Clause 8) shall not require any modification to be made to the appliance.

5.4 Detachable fireguards

NOTE 1 See Figure 4.

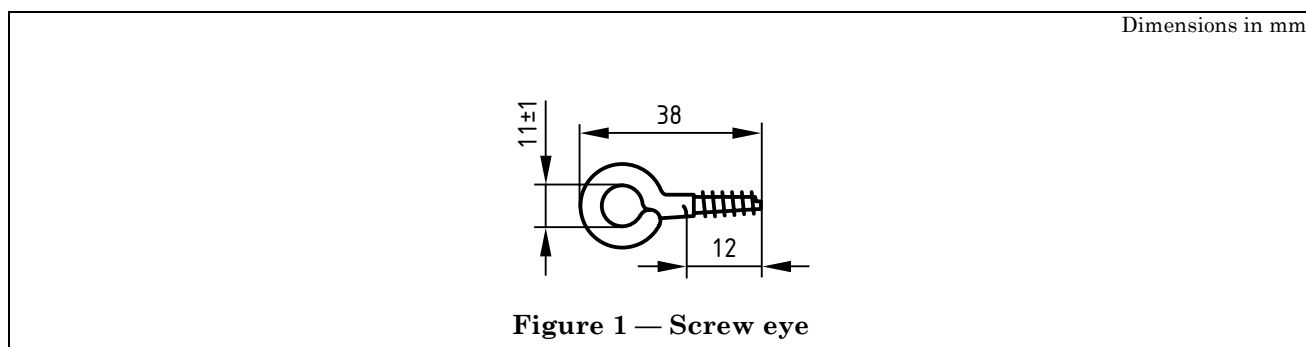
The fireguard shall be provided with two safety hooks, integral with the frame of the fireguard. The hooks shall be:

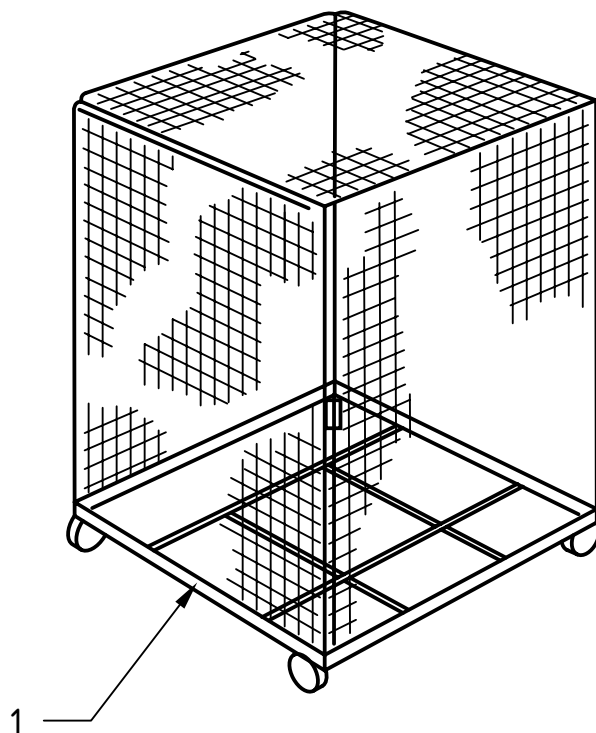
- a) capable of engaging with the screw eyes;
- b) situated at a height between 25 mm and 75 mm above the centre line of the guard;
- c) provided with a spring mechanism requiring a force of at least 25 N to release the hook, or other device requiring a force of at least 60 N for release.

The screw eyes shall be supplied with the fireguard for fixing onto the wall or the fireplace surround at the sides of the appliance. The screw eyes shall be brass or steel wire of diameter not less than 3.5 mm with dimensions as specified below:

- a) maximum overall length of 38 mm;
- b) minimum threaded length of 12 mm;
- c) internal diameter of (11 ± 1) mm.

NOTE 2 See Figure 1.





Key

1) Optional base with castors to retain mobility appliance.

Figure 2 — Example of a moveable fireguard for portable heating appliances