

C. TECHNICAL GUIDANCE

C.1 List of standards that are deemed to satisfy the applicable safety requirements of the Regulation

1.1 Prescribed products

In general, electrical products that conform to the safety standards listed below or equivalent standards are deemed to satisfy the applicable safety requirements of the Regulation subject to complying with the "General conditions" requirements stipulated in Schedule 1 of the Regulation, the additional and specific safety requirements for particular types of electrical products (Section 5, Section 6 & Schedule 2 of the Regulation refer) detailed as follows:

- (A) For a 5A or 15A plug which is manufactured to BS 5733, the construction and dimensions of plug pins and markings on the plug shall conform to BS 546 [Specific safety requirement (b)(iii) under Item 1, Schedule 2 of the Regulation].
- (B) For a 13A plug which is manufactured to BS 5733, the construction and dimensions of plug pins, markings on the plug and fuse-link shall conform to BS 1363 Part 1 [Specific safety requirement (a)(iii) under Item 1, Schedule 2 of the Regulation].
- (C) There are some accepted deviations for 5A & 15A adaptors [Specific safety requirements (1)(a)(ii) & (1)(c)(ii) under Item 2, Schedule 2 of the Regulation] :
 - a 5A adaptor protected by fuse-links conforming to BS 1362 is permitted;
 - a 5A adaptor with not more than three 5A sockets protected by one 5A main fuse-link conforming to BS 646 or BS 1362 is permitted;
 - a 15A adaptor protected by fuse-links conforming to BS 1362 is permitted;
 - the 15A non-fused socket of a 15A adaptor may be replaced by a 13A non-fused socket, the construction and dimensions of which shall conform to BS 1363 Part 2;
 - a 15A adaptor fitted with a 13A or 15A non-fused socket and not more than two 5A sockets which are protected by one 5A main fuse-link conforming to BS 646 or BS 1362 is permitted;
 - a 15A adaptor fitted with not more than three 5A sockets which are protected by one 5A main fuse-link conforming to BS 646 or BS 1362 is permitted.
- (D) For lampholders, the additional requirements on marking [Specific safety requirement (1) under Item 3, Schedule 2 of the Regulation] are :
 - for an Edison screw lampholder, the letter "L" shall be marked adjacent to the line terminal for cable connection; and

- for a metal lampholder, the words "THE LAMP-HOLDER MUST BE EARTHED" or equivalent wording shall be indicated in the associated packaging and the symbol (E or) shall be marked adjacent to the earthing terminal.
- (E) For flexible cords, except for that fitted to an electrical product, the nominal cross sectional area of a conductor and the relevant standard to which a flexible cord conforms shall be marked on the outer sheath of the flexible cord at appropriate intervals [Specific safety requirement (1)(a) under Item 4, Schedule 2 of the Regulation].
- (F) For extension units, the plug, flexible cord and socket portions shall conform to the listed safety standards. For details of the different designs and arrangements of the extension units, specific safety requirements (1) to (14) under Item 5, Schedule 2 of the Regulation shall be referred.
- (G) For an unvented thermal storage type electric water heater, the following safety equipment [Specific safety requirement (4) under Item 6, Schedule 2 of the Regulation] shall be fitted :
- a thermostat which shall be fitted to control the heating of the stored water;
 - a thermal cut out which -
 - (I) shall be fitted to cut off the supply of electricity when the stored water is heated above the temperature setting of the thermostat and before the operation of the temperature and pressure relief valve is initiated;
 - (II) shall be wired in series with the thermostat; and
 - (III) shall require manual resetting when the enclosure of the electric water heater is dismantled; and
 - a temperature and pressure relief valve which shall be either-
 - (I) (a) a non-resettable temperature relief valve, having a set temperature of 90⁰C and being provided with manual test mechanism; and
 - (b) a pressure relief valve, having a set pressure not greater than the maximum designed pressure of the electric water heater or than 1000 kPa, and being provided with manual test mechanism; or
 - (II) a non-resettable temperature and pressure relief valve, having a set temperature of 90⁰C and a set pressure not greater than the maximum designed pressure of the water heater or than 1000 kPa, and being provided with manual test mechanism; or
 - (III) a temperature and pressure relief valve complying with EN 1490 or equivalent safety standards.
- [Notice of Exemption dated 8 March 2002]

- (H) An unvented thermal storage type electric water heater shall be a Class I or Class II product [Section 6(1) of the Regulation refers].

The safety standards listed below are deemed to satisfy the applicable safety requirements of the Regulation subject to the additional safety requirements as stated above. This list is not exhaustive and will be updated as and when required. Household electrical products conforming to safety standards other than those listed are also acceptable if the corresponding standards can be proved to be equivalent to the relevant standards on the list or in compliance with the applicable safety requirements prescribed by the Regulation. For details of the scope and application of an individual standard, please refer to its latest version published by the relevant authority.

1.1.1 **Plugs**

Electrical Products

Standards

(Prefix shown next to the reference number of the standard refers to the particular sub-section in C.1 - 1.1 above)

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|---|--|--|
| - | 3-pin 5A plug

3-pin 15A plug | BS 546 : Specification. Two-pole and earthing-pin plugs, socket-outlets and socket-outlet adaptors, or

BS 5733 ^A : Specification for general requirements for electrical accessories |
| - | 3-pin 13A plug | BS 1363 Part 1 : Specification for rewirable and non-rewirable 13A fused plugs, or

BS 5733 ^B : Specification for general requirements for electrical accessories |
| - | 2-pin reversible plugs which are designed for connecting to a shaver supply unit conforming to BS 3535 Part 1 | BS 4573 : Specification for 2-pin reversible plugs and shaver socket outlets, or

EN 50075 : Specification for flat non-rewirable two-pole plugs 2.5A 250V, with cord, for the connection of class II equipment for household and similar purposes |
| - | IEC plug (special adaptor to be added to convert the plug for compliance with BS 5733, BS 546 or BS 1363 Part 1) | IEC 60884-1 : Plugs and socket-outlets for household and similar purposes-
General requirements |

1.1.2 **Adaptors**

Electrical Products

- 5A adaptor
15A adaptor
- 13A adaptor

Standards

BS 546^C : Specification. Two-pole and earthing-pin plugs, socket-outlets and socket-outlet adaptors

BS 1363 Part 3 : Specification for adaptors

1.1.3 **Lampholders**

Electrical Products

- Bayonet type lampholders
- Edison screw type lampholders

Standards

IEC 60061-2^D : Lamps caps and holders together with gauges for the control of interchangeability and safety - Lampholders

IEC 61184^D : Bayonet lampholders

IEC 60061-2^D : Lamps caps and holders together with gauges for the control of interchangeability and safety - Lampholders

IEC 60238^D : Edison screw lampholders

1.1.4 **Flexible Cords**

Electrical Products

- PVC insulated flexible cord
- Rubber insulated flexible cord

Standards

IEC 60227^E : Polyvinyl chloride insulated cables with rated voltages up to and including 450/750V

BS 6500^E : Electric cables. Flexible cords with rated voltages up to and including 300/500V, for use with appliances and equipment intended for domestic, office and similar environments

IEC 60245^E : Rubber insulated cables with rated voltages up to and including 450/750V

BS 6500^E : Electric cables. Flexible cords with rated voltages up to and including 300/500V, for use with

appliances and equipment intended for domestic, office and similar environments

Standards

1.1.5 Extension Units^F

For plug portion
(3-pin 5A, 13A & 15A plugs)

see item 1.1.1 above

For flexible cords

see item 1.1.4 above

For socket portion

BS 546 : Specification. Two-pole and earthing-pin plugs, socket-outlets and socket-outlet adaptors

BS 1363 Part 2 : Specification for 13A switched and unswitched socket-outlets

For cable reels

IEC 61242 : Electrical accessories – Cable reels for household and similar purposes

1.1.6 Unvented Thermal Storage Type Electric Water Heaters

Standards

IEC 60335-2-21^G : Particular requirements for storage water heaters

BS 7206^G : Specification for unvented hot water storage units and packages

BS 3456 Part 102.21^G : Storage water heaters

For thermal cut out

BS 3955 : Specification for electrical controls for household and similar general purposes

For temperature and pressure relief valves

BS 6283 : Safety and control devices for use in hot water systems

EN 1490 : Building valves – Combined temperature and pressure relief valves – Tests and requirements

ANSI Z21.22 : Relief valves for hot water supply systems

AS 1357.1 : Water supply – Valves for use with unvented water heaters – Protection valves