

## ANNEX I

### ESSENTIAL REQUIREMENTS

#### 3. DESIGN AND CONSTRUCTION

##### 3.1. General

- 3.1.1. Appliances must be so constructed that, when used normally, no instability, distortion, breakage or wear likely to impair their safety can occur.
- 3.1.2. Condensation produced at the start-up and/or during use must not affect the safety of appliances.
- 3.1.3. Appliances must be so designed and constructed as to minimise the risk of explosion in the event of a fire of external origin.
- 3.1.4. Appliances must be so constructed that water and inappropriate air penetration into the gas circuit does not occur.
- 3.1.5. In the event of a normal fluctuation of auxiliary energy, appliances must continue to operate safely.
- 3.1.6. Abnormal fluctuation or failure of auxiliary energy or its restoration must not lead to an unsafe situation.
- 3.1.7. Appliances must be so designed and constructed as to obviate hazards of electrical origin. In the area in which it applies, compliance with the safety objectives in respect of electrical hazards laid down in Directive 2006/95/EC of the European Parliament and of the Council<sup>(1)</sup> shall be equivalent to fulfilment of this requirement.
- 3.1.8. All pressurised parts of an appliance must withstand the mechanical and thermal stresses to which they are subjected without any deformation affecting safety.
- 3.1.9. Appliances must be so designed and constructed that failure of a safety, controlling or regulating device may not lead to an unsafe situation.
- 3.1.10. If an appliance is equipped with safety and controlling devices, the functioning of the safety devices must not be overruled by that of the controlling devices.
- 3.1.11. All parts of appliances which are set or adjusted at the stage of manufacture and which should not be manipulated by the user or the installer must be appropriately protected.
- 3.1.12. Levers and other controlling and setting devices must be clearly marked and give appropriate instructions so as to prevent any error in handling. Their design must be such as to preclude accidental manipulation.

##### 3.2. Unburned gas release

- 3.2.1. Appliances must be so constructed that the gas leakage rate is not dangerous.
- 3.2.2. Appliances must be so constructed that gas release during ignition and re-ignition and after flame extinction is limited in order to avoid a dangerous accumulation of unburned gas in the appliance.
- 3.2.3. Appliances intended to be used in indoor spaces and rooms must be fitted with a special device which avoids a dangerous accumulation of unburned gas in such spaces or rooms.

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Appliances which are not fitted with such devices must be used only in areas where there is sufficient ventilation to avoid a dangerous accumulation of unburned gas.

Member States may define on their territory adequate space ventilation conditions for the installation of such appliances, bearing in mind the features peculiar to them.

Large-scale kitchen appliances and appliances powered by gas containing toxic components must be equipped with the aforesaid device.

### 3.3. Ignition

Appliances must be so constructed that, when used normally:

- ignition and re-ignition is smooth,
- cross-lighting is assured.

### 3.4. Combustion

3.4.1. Appliances must be so constructed that, when used normally, flame stability is assured and combustion products do not contain unacceptable concentrations of substances harmful to health.

3.4.2. Appliances must be so constructed that, when used normally, there will be no accidental release of combustion products.

3.4.3. Appliances connected to a flue for the dispersal of combustion products must be so constructed that in abnormal draught conditions there is no release of combustion products in a dangerous quantity into the room concerned.

3.4.4. Independent flueless domestic heating appliances and flueless instantaneous water heaters must not cause, in the room or space concerned, a carbon monoxide concentration likely to present a danger to the health of persons exposed, bearing in mind the foreseeable duration of their exposure.

### 3.5. Rational use of energy

Appliances must be so constructed as to ensure rational use of energy, reflecting the state of the art and taking into account safety aspects.

### 3.6. Temperatures

3.6.1. Parts of appliances which are intended to be placed in close proximity to the floor or other surfaces must not reach temperatures which present a danger in the surrounding area.

3.6.2. The surface temperature of knobs and levers of appliances intended to be manipulated must not present a danger to the user.

3.6.3. The surface temperatures of external parts of appliances intended for domestic use, with the exception of surfaces or parts which are associated with the transmission of heat, must not under operating conditions present a danger to the user and in particular to children, for whom an appropriate reaction time must be taken into account.

### 3.7. Foodstuffs and water used for sanitary purposes

Without prejudice to the Community rules in this area, materials and components used in the construction of an appliance, which may come into contact with food or water used for sanitary purposes, must not impair their quality.

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- (1) [OJ L 374, 27.12.2006, p. 10.](#)