



# ***European Guideline***

CFPA-E No 24:2010 F

Fire safe homes





## FOREWORD

The European fire protection associations have decided to produce common guidelines in order to achieve similar interpretation in the European countries and to give examples of acceptable solutions, concepts and models. The Confederation of Fire Protection Associations in Europe (CFPA E) has the aim to facilitate and support fire protection work in the European countries.

The market imposes new demands for quality and safety. Today fire protection forms an integral part of a modern strategy for survival and competitiveness.

The guideline is primarily intended for public, and for house and residential property owners and tenants. It is also aimed at the rescue services, consultants, safety companies and the like so that, in the course of their work, they may be able to help increase fire safety in society.

The proposal of this guideline was presented by the Swedish Fire Protection Association.

This guideline has been compiled by Guidelines Commission and adopted by all fire protection associations in the Confederation of Fire Protection Associations Europe.

These guidelines reflect best practice developed by the countries of CFPA Europe. Where the guidelines and national requirement conflict, national requirements must apply.

Zürich, 26 April 2010  
CFPA Europe

Dr. Hubert Rüegg  
Chairman

Stockholm, 26 April 2010  
Guidelines Commission

Tommy Arvidsson  
Chairman





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## 1 Introduction

This guideline sets out the requirements that must be satisfied in order that a dwelling may be categorised as a Fire Safe Home. The intention is that this guideline should be applicable to all types of dwellings, from single family houses to flats in multi-storey buildings.

The guideline describe both a base package which CFPA Europe considers reasonable in a dwelling, and also a number of optional measures that can be selected to further improve fire protection.

The concept of Fire Safe Homes is based on insight, knowledge and motivation and on the applicability at all times of the requirements set out in this document. Through being aware of the fire risks that may arise in the home, and by maintaining and checking the appliances and equipment provided for fire protection, the residents will be well prepared should a fire nevertheless occur.

We welcome the involvement of all who want to help us promote our vision of a Europe with greater fire safety in our homes, and where the number of fire deaths will steadily decrease.

## 2 Scope

This guideline specifies the basic requirements for a fire safe home, and also includes options which in some countries in Europe are recommended. CFPA Europe supports these options.

## 3 Definition - (see also European Guideline No 10:2008 F)

**Cooker guard:** A device that automatically disconnects power to an electric cooker after a certain preset time, in combination with an overheating/smoke warning system.

**Portable fire extinguishers:** Cylinders containing extinguishing agents intended to fight a small fire. There are different types of portable fire extinguishers. They are classified according to the type of fire on which they are safe to use and their performance. The extinguishing agent may be water, foam, carbon dioxide or powder. .

**Residential extinguishing system:** Water sprinkler system or water mist system for dwellings intended to increase protection against injuries and fatalities.

**Risk:** Aggregate assessment of the probability and consequences of an unwanted event, in this case a fire.



**Smoke alarm:** A device that can continuously register the characteristics of smoke from an incipient fire and automatically emit an alarm signal when specified parameters are exceeded.

**Structural fire protection:** Measures taken in the structure of the building to prevent the outbreak of fire and/or limit the damage caused by fire. Examples of structural fire protection are fire doors and surface treatment of walls and ceilings.

## 4 Base level for fire safe homes

### 4.1 Smoke alarms or fire detection system

#### *Option 1*

- The dwelling shall be equipped with a mains operated fire alarm with integral battery backup.
- Each story shall have at least one smoke alarm.
- Each smoke alarm shall protect not more than 60 m<sup>2</sup>.
- The distance between smoke alarms shall not exceed 12 m.
- The smoke alarm shall be mounted at least 50 cm from a wall and sited so that sleeping persons can be woken by the signal.
- Smoke alarms shall in other respects be sited in accordance with the maker's instructions and adapted to the layout of the building or dwelling.
- Smoke alarms may be of the optical or ionising type. When more than one smoke detector is installed, both types should be represented. If using an ionic smoke alarm it is important to follow the national requirements for radiation protection.
- Smoke alarms shall comply with EN 14604.

#### *Option 2*

- The dwelling shall be equipped with a mains operated fire detection and alarm system with battery backup and connected detectors.
- Each storey shall have at least one smoke detector and one acoustic alarm.
- Each smoke detector shall protect not more than 60 m<sup>2</sup>.
- The distance between smoke detectors shall not exceed 12 m.
- The smoke detectors shall be mounted at least 50 cm from a wall.
- Alarms shall be sited so that sleeping persons can be woken by the signal.
- Smoke detectors and fire alarms shall in other respects be sited in accordance with the maker's instructions and adapted to the layout of the building or dwelling.
- Smoke detectors may be of optical or ionising type. When more than one smoke detector is installed, both types should be represented. If using an ionic fire alarm it is important to follow the national requirements for radiation protection.
- Fire detectors shall comply with EN 54-7.
- Alarm devices shall comply with EN 54-3
- The system shall emit an error signal in the event of a fault in the wiring or interruption of the mains power supply.



- The system shall be capable of emitting an alarm signal for not less than 10 minutes after a power interruption of 24 hours.
- If the system is combined with intruder detectors, the smoke detectors shall not be disconnected when the intruder detectors are reset.

*\* Footnote: It's important to follow the national requirements when choosing a smoke alarm. All components shall comply with EN 54-13.*

#### **4.2 Portable fire extinguishers**

- There shall be at least one extinguisher and it is important to follow the national requirements when the type of extinguisher is chosen.
- Portable fire extinguishers shall be mounted with the supplied fixing device in such a way that the carrier handle is approx. 90 cm above floor level.
- Portable fire extinguishers shall be sited near usual entry points and shall be readily accessible.
- Portable fire extinguishers shall comply with the requirements of EN 3 and shall be certified by an accredited certification body.

#### **4.3 Cooker guard/timer**

The cooker guard system shall consist of a timer function which can limit the time when power is supplied to the cooker, combined with:

- Motion detector – power supply to the cooker is disconnected if all persons leave the room where the cooker is located. The time when disconnection occurs can be preset.
- or
- heat detector – power supply to the cooker is disconnected when the temperature of the cooker reaches a present figure.
- or
- smoke detector/fire alarm – power supply to the cooker is disconnected if the installed smoke detector/fire alarm is activated by development of smoke

The products contained in the system shall, as and when applicable, comply with national requirement for surveillance systems/cooker guards.

#### **4.4 Fire blankets**

- There shall be a fire blanket complying with EN 1869, of dimensions 120x180 cm, in the dwelling.
- The fire blanket shall be kept in a separate holder which shall be mounted in a place where it is rapidly available, for example in the kitchen.

#### **4.5 Fire safety information**

Fire safety information, including a check list (see appendix), shall be available that can be inserted into the fire and safety section in the occupant information pack.



The information material should describe electrical hazards, and describe how to avoid the risks. There are all different kinds of electrical appliances in a dwelling, and these can cause fires if they overheat or are incorrectly used.

The material shall contain information on the means of escape, the fire alarm and fire fighting measures. Instruction shall be given on the action to take in the event of fire and smoke development in one's own or neighbouring dwelling. Information shall be given on how the alarm can be communicated to the fire / rescue service, police and ambulance. Finally it shall also describe an evacuation plan, and the importance of informing everyone who is living in the dwelling about the evacuation plan. Where a window is provided for escape purposes the mode of operation of this shall be mentioned.

The attendance time and capability of the fire / rescue service shall be set out, so that the occupants may appreciate how important it is that they themselves should take rapid action in the event of an incident.

Servicing and user maintenance instructions shall be provided for the fire protection installations and equipment in the dwelling, such as smoke detectors, fire detection and alarm systems, portable fire extinguishers, domestic sprinklers and escape ladders. It is also important with servicing and user maintenance instructions for free standing stoves.

In blocks of flats it may also be appropriate to set out the fire protection rules that apply in stairways, garages, attic storage compartments and basements, and for the storage of flammable products in the dwelling.

The material shall also contain instructions on how to perform cardiopulmonary resuscitation (CPR) and what to do in the event of skin burns.

#### **4.6 Training**

The owner/tenant shall have fire protection training. The training should deal with

- Fire hazards in the home
- The integral fire protection of the building
- How to call the fire / rescue service and what happens when it arrives
- Attendance time and capability of the fire / rescue service
- Function of portable fire extinguishers
- How to test the function of smoke alarms
- How to escape in the event of fire
- Heat producing appliances

Fire protection training shall be carried out by a person/firm with good knowledge about fire safety at homes.



## 5 Optional level

### 5.1 Residential extinguishing system

Most fatal fires, both in Europe and in other parts of the world occur in dwellings. Many lives could be saved if a residential extinguishing system (sprinkler or water mist system) were installed in dwellings. They could also help to mitigate damage in properties of high value.

The primary function of a residential extinguishing system is to save lives by preventing flashover in dwellings. Residential extinguishing systems should be designed in accordance with national requirements or in their absence, in accordance with other national or European guidelines.

### 5.2 Additional fire alarms

A level of safety higher than that according to the requirements in the base level can be achieved by the optional installation of a connected smoke alarm in every room.

### 5.3 Escape ladder

A fixed escape ladder system can sometimes be a good solution for use in the event of escape from rooms in the dwelling that are situated up to 5 m above ground level.

## 6 Reference

Smoke alarms in the home, CFPA E Guideline No 10:2008, CFPA Europe.

## 7 European guidelines

Guideline No	1:2002 F	-	Internal fire protection control
Guideline No	2:2007 F	-	Panic & emergency exit devices
Guideline No	3:2011 F	-	Certification of thermographers
Guideline No	4:2010 F	-	Introduction to qualitative fire risk assessment
Guideline No	5:2003 F	-	Guidance signs, emergency lighting and general lighting
Guideline No	6:2004 F	-	Fire safety in residential homes for the elderly
Guideline No	7:2011 F	-	Safety distance between waste containers and buildings
Guideline No	8:2004 F	-	Preventing arson – information to young people
Guideline No	9:2005 F	-	Fire safety in restaurants
Guideline No	10:2008 F	-	Smoke alarms in the home
Guideline No	11:2005 F	-	Recommended numbers of fire protection trained staff
Guideline No	12:2006 F	-	Fire safety basics for hot work operatives
Guideline No	13:2006 F	-	Fire protection documentation
Guideline No	14:2007 F	-	Fire protection in information technology facilities
Guideline No	15:2010 F	-	Fire safety in guest harbours and marinas
Guideline No	16:2008 F	-	Fire protection in offices



- Guideline No 17:2008 F - Fire safety in farm buildings
- Guideline No 18:2008 F - Fire protection on chemical manufacturing sites
- Guideline No 19:2009 F - Fire safety engineering concerning evacuation from buildings
- Guideline No 20:2009 F - Fire safety in camping sites
- Guideline No 21:2009 F - Fire prevention on construction sites
- Guideline No 22:2010 F - Wind turbines – Fire protection guideline
- Guideline No 23:2010 F - Securing the operational readiness of fire control system
- Guideline No 24:2010 F - Fire safe homes
- Guideline No 25:2010 F - Emergency plan
- Guideline No 26:2010 F - Fire protection of temporary buildings on construction sites



## 8 Appendix

This is an example for a checklist for fire prevention in the home. All questions should be answered with yes.

### 8.1 Checklist: Fire prevention in the home

*We are aware of the existing fire risks*

YES  NO

*The fire detectors are working*

YES  NO

*Everybody in our family knows where the fire extinguisher is located*

YES  NO

*Everybody in our family knows how to use the fire extinguisher*

YES  NO

*Everybody in our family knows how to use the fire blanket*

YES  NO

*Kitchen appliances, computers and TVs are free from dust*

YES  NO

*All our cables and plugs are undamaged.*

YES  NO

*Our lamps are placed well away from combustible materials*

YES  NO

*Candles in candlesticks are placed steadily and with no risk of toppling over*

YES  NO

*All family members put out candles when leaving a room*

YES  NO

*We keep matches and lighters out of reach from the children, preferably locked away*

YES  NO

*Our light bulbs are at the right wattage*

YES  NO



*We use electrical extension leads and adaptors as little as possible*

YES  NO

*We make sure cables are not damaged*

YES  NO

*We try not to leave the stove when cooking, even though we have a stove guard installed.*

YES  NO

*Our kitchen extract fan is cleaned regularly*

YES  NO

*We unplug the percolator or the toaster when not in use or have a timer installed*

YES  NO

*We know how to handle flammable fluids and oils that may be prone to self ignition.*

YES  NO

*We don't keep flammable material in the immediate vicinity of the fireside*

YES  NO

*We have a fire guard in front of the open fire*

YES  NO

*Our chimney is inspected and swept before every winter*

YES  NO

*Is it easy to open windows and to get out that way*

YES  NO