

Fire safe homes

CFPA-E Guideline No 24:2016 F



 **CFPA**EUROPE

Endorsed by:





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.

Copenhagen, October 2016
CFPA Europe

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Keywords: Smoke alarm, smoke detector, fire extinguisher, cooktop, fireplace, electrical appliances, cables, escape



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 describes 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)

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 m².
- 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 m².
- 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.*

*** In case the occupants have some sort of hearing impairment, the audible alarm should also be complemented with visual and vibrating alarm.*



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 Devices for fire prevention and suppression for electric hobs (cooktops)

Devices for fire prevention and suppression for electric hobs (cooktops) shall comply with at least one of the requirements in EN 50615:2015.

The European standard EN 50615:2015 deals with the safety of electric devices used for detection, prevention and suppression of fire originated from a cooking process or from flammable material left on the hob.

The standard categories three kinds of fire protection devices:

- Category A: Device for extinguishing and simultaneous power cut-off of the appliance.
- Category B: Device for preventive power cut-off of the appliance.
- Category AB: Device for preventive power cut-off of the appliance, followed by extinguishing, if flame occurs.

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 extinguishing 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 Fire safety knowledge

The owner/tenant shall have basic knowledge about fire safety such as:

- Fire hazards in the home
- 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
- Fire safety concerning fireplaces

Fire safety knowledge can be achieved by e-learning, studies of information or guided training.

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, CFP A E Guideline No 10:2008, CFP A Europe.

7 European guidelines

Fire

Guideline No. 1:2014 F	Internal fire protection control
Guideline No. 2:2013 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. 5:2016 F	Guidance signs, emergency lighting and general lighting
Guideline No. 6:2011 F	Fire safety in care 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. 9:2012 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. 12:2012 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. 15:2012 F	Fire safety in guest harbours and marinas
Guideline No. 16:2008 F	Fire protection in offices
Guideline No. 17:2014 F	Fire safety in farm buildings
Guideline No. 18:2013 F	Fire protection on chemical manufacturing sites
Guideline No. 19:2009 F	Fire safety engineering concerning evacuation from buildings
Guideline No. 20:2012 F	Fire safety in camping sites
Guideline No. 21:2012 F	Fire prevention on construction sites
Guideline No. 22:2012 F	Wind turbines – Fire protection guideline
Guideline No. 23:2010 F	Securing the operational readiness of fire control system
Guideline No. 24:2016 F	Fire safe homes
Guideline No. 25:2010 F	Emergency plan
Guideline No. 26:2010 F	Fire protection of temporary buildings on construction sites
Guideline No. 27:2011 F	Fire safety in apartment buildings
Guideline No. 28:2012 F	Fire safety in laboratories
Guideline No. 29:2013 F	Protection of paintings: Transport, exhibition and storage
Guideline No. 30:2013 F	Managing fire safety in historical buildings
Guideline No. 31:2013 F	Protection against self-ignition and explosions in handling and storage of silage and fodder in farms



- Guideline No. 32:2014 F Treatment and storage of waste and combustible secondary raw materials
- Guideline No. 33:2015 F Evacuation of people with disabilities
- Guideline No. 34:2015 F Emergency Power Supplies

Natural hazards

- Guideline No. 1:2012 N Protection against flood
- Guideline No. 2:2013 N Business Resilience – An introduction to protecting your business
- Guideline No. 3:2013 N Protection of buildings against wind damage
- Guideline No. 4:2013 N Lightning protection
- Guideline No. 5:2014 N Managing heavy snow loads on roofs
- Guideline No. 6:2016 N Forest Fires

Security

- Guideline No. 1:2010 S Arson document
- Guideline No. 2:2010 S Protection of empty buildings
- Guideline No. 3:2010 S Security system for empty buildings
- Guideline No. 4:2010 S Guidance on key holder selections and duties
- Guideline No. 5:2012 S Security guidelines for museums and showrooms
- Guideline No. 6:2014 S Security Guidelines for Safe Emergency Exit Doors in Non-Residential Premises





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