

2011

GUIDELINES

Safety requirements for candle products and certain products that constitute a fire hazard

The Finnish Safety and Chemicals Agency

tuikes



GUIDELINES ISSUED BY THE FINNISH SAFETY AND CHEMICALS AGENCY (TUKES) ON HOW TO ENSURE THE SAFETY OF CANDLE PRODUCTS AND CERTAIN PRODUCTS THAT CONSTITUTE A FIRE HAZARD

THESE GUIDELINES are issued by the Finnish Safety and Chemicals Agency (Tukes) to promote the safety of candle products and certain products that constitute a fire hazard. These guidelines cover key issues related to the safety of products that constitute a fire hazard based on legislation, standards, research and security issues detected during supervision as regards structural aspects as well as labelling and instructions for use. Operator can use these guidelines to make their products safer and provide consumers with the warnings and user instructions needed for safe use.

According to Finland's new Consumer Safety Act (920/2011) in force from the beginning of 2012, consumer products may not pose a risk. Under section 11 of the Act, information such as guidelines and recommendations issued by supervising authorities can be taken into consideration in assessments of risks posed by consumer goods. These guidelines are used by the supervisory authority to assist in conformity assessments. The content of section 11 of the Consumer Safety Act (920/2011) corresponds to section 7 of the Act on the Safety of Consumer Goods and Consumer Services (75/2004) valid until the end of 2011.

Also applicable to products covered by these guidelines are the Government decree on information to be supplied in respect of consumer goods and services (613/2004) and relevant European standards.

Where necessary, these guidelines will also supplement legislation and standards that will enter into force and become applicable following the publication of these guidelines.

These guidelines replace the previous Consumer Agency Guidelines on Safety Requirements for Candle Products and Related Indications of 15 October 2001 as well as the specified control procedure for candle products dated 14 August 2003.

21 October 2011

DIRECTOR GENERAL	Seppo Ahvenainen
DIRECTOR	Tuiri Kerttula

CONTENTS

- 1 General | P. 3
- 2 Labelling requirements under the Government decree
on data to be provided regarding consumer goods and services | P. 5
- 3 Indoor candle products | P. 6
 - 3.1 Products | P. 6
 - 3.2 Risk factors affecting safety | P. 6
 - 3.3 Structural requirements | P. 6
 - 3.4 Chemical risk factors | P. 7
 - 3.5 Labelling requirements | P. 7
 - 3.6 Testing | P. 8
- 4 Candle products intended for outdoor use only | P. 9
 - 4.1 Products | P. 9
 - 4.2 Factors affecting safety | P. 9
 - 4.3 Structural requirements | P. 9
 - 4.4 Labelling requirements | P. 9
 - 4.5 Testing | P. 9
- 5 Decorative oil lamps and corresponding other products | P. 10
 - 5.1 Products | P. 10
 - 5.2 Structural requirements | P. 10
 - 5.3 Labelling | P. 10
 - 5.4 Testing | P. 10
- 6 Burning mosquito repellents | P. 11
- 7 Candle rings, chandeliers, candelabra, candlesticks and candle holders | P. 11
- 8 Candle gels and waxes sold to consumers | P. 12
- 9 Other products that constitute a fire hazard | P. 12
 - 9.1 Cigarette lighters | P. 12
 - 9.2 Matches | P. 13
 - 9.3 Log torches | P. 13
 - 9.4 Garden torches | P. 13
 - 9.5 Airborne lanterns | P. 13
 - 9.6 Sparklers | P. 13
 - 9.7 Disposable barbecues | P. 13
 - 9.8 Flueless fireplaces | P. 14
- 10 Environmental factors related to candle products | P. 15
- 11 List of legislation and standards to be applied | P. 15

1 General

TUKES (UNTIL 1 JANUARY 2010 THE CONSUMER AGENCY) and Finnish Customs have monitored and tested the safety of various types of candle products and information (instructions for use and warnings) provided concerning them for many years. The requirements and guidelines regarding the structure and materials of candle products aim to ensure consumer safety and fire safety.

These guidelines are based on the Act on the Safety of Consumer Goods and Consumer Services (75/2004), the Consumer Safety Act (920/2011) approved on 22 July 2011 that repeals it and is in force from 1 January 2012, the Government decree on information to be supplied in respect of consumer goods and services (613/2004), European standards, market surveillance decisions practice, results of surveillance studies, overall risk assessments and a research and development project on candle product safety commissioned by the Consumer Agency in 2004 from VTT Building Technology, Construction and Facility Management. Authorities, test laboratories and enterprises were also consulted during the formulation of these guidelines.

In addition to these guidelines, the provisions of Chapter 2 of the Consumer Protection Act (38/1978) on marketing and Chapter 5 on defects in goods must also be taken into consideration. False or misleading information may not be provided in marketing. Candle products must correspond to what can be deemed to have been agreed as regards their type, quantity, quality, other characteristics and packaging. Candle products must be fit for the purpose for which such goods are ordinarily used. Candle products are regarded as defective if they are not delivered complete with such instructions that are necessary for the buyer for their installation, assembly, use, maintenance or storage. Candle products are also defective if they do not conform to the information given by the seller or by a person other than the seller either at a previous level of the supply chain or on behalf of the seller on the characteristics or the use of the product when marketing the product or otherwise before the conclusion of the sale.

Several product groups that fall under the scope of application of these guidelines are also covered by chemicals legislation.¹ The REACH Regulation (Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals) lays down provisions concerning enterprises' registration and information provision obligations and obligations regarding the use of substances subject to authorisation, and the CLP Regulation (Regulation (EC) No 1272/2008 of the European Parliament and the Council on classification, labelling and packaging) lays down provisions concerning obligations relating to the classification, labelling and packaging of chemicals. Annex XVII to the REACH Regulation also contains provisions regarding restrictions on the manufacture, placing on the market and use of certain dangerous chemical substances, mixtures and articles that consumer products may not contain. Candles are regarded as mixtures, which means they are preparations (mixtures of substances) and the substances in them must be registered in the same way as other substances unless an exception under Annex IV or V applies to them. As regards manufacturers and importers, it is important to comply with the registration obligation (registration of phase-in substances) in accordance with the tonnages for each ingredient. For more information about the REACH Regulation and the "candidate list", visit the Finnish REACH and CLP Helpdesk at <http://www.reachneuvonta.fi/Reach/reach.nsf/sp?open&cid=homepage&size=>.

Provisions regarding product groups within the scope of application of these guidelines are also laid down in the decree on dangerous products imitating foodstuffs (359/1991). Under the decree, products imitating foodstuffs that may constitute a health risk if licked, sucked, placed in the mouth or swallowed may not be manufactured, marketed or otherwise supplied in conjunction with business activity or imported. Issues taken into consideration in health risk assessments include the form, odour, taste, colour, packaging and labelling of the product.

¹ Finnish chemicals legislation is currently undergoing a period of transition during which a transition will take place from the current chemicals legislation based on EC directives and implemented under the Chemicals Act (744/1989) and lower-level legislation to legislation based on EU regulations. The old legislation will remain in force alongside the CLP Regulation within certain transitional periods until 2015.

Standards that determine the safety-related structural and labelling requirements as well as testing methods have been created for some of the product groups mentioned in these guidelines. Provisions on the assessment of conformity of consumer goods and services are laid down in the Consumer Safety Act (section 11). The Act determines the status of standards in the assessment of the safety of a consumer good or service. It provides a strong presumption of conformity for such consumer goods and services that comply with standards the references of which have been published in the Official Journal of the European Union. References of other, “ordinary” standards are not published in the Official Journal of the European Union, but the Act still allows their use in the assessment of risks caused by a product or service. The harmonised European standards are published in Finland as SFS-EN standards.

The term ‘candle product’ covers any product which works like a candle, such as freestanding and holder candles, tea lights, gel candles, container candles, outdoor candles and torches, candle lanterns, memorial, garden and oil candles, cake and novelty candles, Christmas tree candles, oil lanterns and lamps, burning mosquito repellents, candle gels and wax sold to consumers as well as candlesticks, chandeliers, candelabra and candle holders and candle rings as well as other corresponding products intended for use with them.

The information (labelling) required for candle products is, by nature, either warnings or instructions for safe use. Its purpose is to draw the consumer’s attention to the safe use of candle products. **Labelling must be placed either on the product itself or its retail packaging or supplied with the product (inside a lantern, for example) in a manner ensuring it will reach the consumer in the purchase situation.**² All writing must be in Finnish and in Swedish in an understandable format and in a sufficiently large font size. Symbols in accordance with the standard *SFS-EN 15494:2007 Candles. Product safety labels* must be clear and large enough. The wording used in labelling is not mandatory, with the exception of burning mosquito repellents and lamp oils, to which the Chemicals Act (744/1989) is applied.

Operators are advised to also comply with the safety requirements of these guidelines as well as general provisions concerning fire safety in their marketing. Marketing must not incite illegal activity or disregard of safety requirements. Particular attention must be paid to issues including not depicting burning candles placed too close to each other, on electrical appliances (such as a TV set) or close to combustible materials (such as dry lichen in decorative arrangements and other corresponding contexts). In TV advertising candles must not be left unsupervised while alight.

It is recommended that candle products be manufactured in such a way that they self-extinguish before burning out. Waste grease must not be used for candle manufacture because of issues including unhealthy combustion gases and sooting as well as the risk of spluttering.

As regards candle products with a plastic enclosure, it is recommended to use types of plastic that meet the structural requirements set for candle products without containing any flame retardants that are hazardous to human health or the environment.

Even if a candle product is marketed as self-extinguishing or the enclosure is made from a material that does not maintain combustion (such as through the use of flame retardants), consumers must not be provided with misleading information or a false sense of security by using phrases such as “the candle is fire safe”.

² Oral communications or written instructions supplied at locations such as retail outlet checkout counters or separate stands are not regarded as sufficient on their own.

2 Labelling requirements under the Government decree on data to be provided regarding consumer goods and services

FURTHER PROVISIONS regarding the obligation to disclose information laid down in section 9 of the Consumer Safety Act (section 5 of the old Act on the Safety of Consumer Goods and Consumer Services, 75/2004) are laid down in the Government decree on information to be supplied in respect of consumer goods and consumer services (613/2004). According to section 3 of the decree, at least the following information must be provided on retail packaging:

- the product's name in accordance with commercial practice (unless otherwise apparent without opening the packaging);
- the name of the manufacturer, the party for whom the product was manufactured or the importer.

It is also recommended that the address of the manufacturer, the party for whom the product was manufactured or the importer be included in the package labelling. For improved product traceability and customer service, it is in the interests of the manufacturer, importer, wholesale and retail traders, consumers and the supervisory authority that products are labelled with the Finnish operators contact details and role in the distribution chain.

If necessary from the consumer health or property perspective, in addition to the above-mentioned information, the labelling must (under section 4 of the decree) also contain:

- information about the composition of the product;
- information about the amount of contents;
- a production batch identifier or other information necessary for the identification and, where necessary, tracing of the product;
- instructions for the assembly, installation and other corresponding issues concerning the product and information, if applicable, stating that the assembly, installation or other corresponding work concerning the product requires a sufficient qualification or otherwise sufficient occupational skills;
- instructions for the use and storage of the product;

- the warnings and instructions necessary for the safe use of the product and instructions for the use of necessary personal protective equipment;
- maintenance, washing, cleaning and servicing instructions;
- instructions for the withdrawal from use and disposal of the product;
- information about any risks related to the use and disposal of the product.

All information necessary for the safe use of candle products must, under the Language Act (423/2003), be provided in Finnish and Swedish unless the information is provided using commonly known instruction and warning labelling. The labelling of candle products must also indicate if the product is scented and this cannot otherwise be detected in the purchase situation (for example, because of the product packaging). It is appropriate from the operator's perspective to include an identifier that enables the tracing of the batch or time of manufacture on products in case of any situation where the product needs to be withdrawn from the market or recalled. This allows any measures to be targeted exclusively at the specific product batch that poses a risk to consumer safety.

3 Indoor candle products

3.1 PRODUCTS

Indoor candle products are deemed to include free-standing and holder candles (incl. “decorative” candles), container candles, aroma and fragrance burners, tea lights and gel candles, floating candles, cake and novelty candles as well as candle lanterns.

Candle lanterns mean a product inside which the consumer places a candle such as a tea light. Examples of candle lanterns include traditional enclosed candle lanterns (such as traditional stable lanterns and tea light holders).

All candle products intended for indoor use that can also be used on a balcony, veranda or outdoors are assessed in accordance with this section 3.

3.2 RISK FACTORS AFFECTING SAFETY

According to a research and development project conducted by VTT Building Technology, Construction and Facility Management on candle product safety, the following factors can be regarded to increase the risks and risk factors relating to tea lights and candle lanterns:

- tea lights with a height larger than the radius (radius = 50% of the diameter, i.e. narrow and tall tea lights) are more likely to flare up;
- in tall and narrow candle lanterns that are open at the top, the wax heats up more strongly and may cause the wax pool to flare up;
- dark-coloured containers heat up more easily;
- metals heat up more strongly and burn when touched;
- a handle or grip that is exposed to the flame.

Practical tests have shown that if the volume of a closed candle lantern is smaller than 1 dm³ (or 1 litre), the surface temperature of the lantern rises to a dangerous level. As regards gel candles, key safety factors found in research are sufficient container surface size and sufficient container thickness.³

Glazing of ceramic containers prevents the candle wax from seeping through the container.

Several wicks placed close to each other heat each other up and increase the risk of a flare-up.

3.3 STRUCTURAL REQUIREMENTS

Candle products used indoors must not pose a risk. Indoor candles must comply with the structural requirements of the standard *SFS-EN 15493:2007 Candles. Specification for fire safety* and the requirements concerning sooting of the standard *SFS-EN 15426:2007 Candles. Specification for sooting behaviour*.

According to the *SFS-EN 15493:2007* standard:

- Free-standing candles must not tip over on a slope of 10 degrees.
- No secondary ignition may occur for more than 10 seconds. Secondary ignition means the ignition of a material used in the candle other than the wick. Secondary ignition covers the flare-up of the molten fuel pool as well that of materials used in the candle (such as the container, coverings or decorations). A flare-up (or flash-over) is a situation where the entire top surface of the candle flares up.
- The flame height of tea lights must not exceed 30 mm. The flame height of other candle types must not exceed 75 mm.
- Container candles and candles marketed as self-extinguishing must, at the end of the burning time, self-extinguish and, in the case of container candles, not cause the container to break.
- The wick must not continue to glow or smoke for more than 20 seconds after extinguishing. After extinguishing the candle must not spontaneously re-light.

The standard *SFS-EN 15426:2007 Candles. Specification for sooting behaviour* determines the sooting behaviour requirements for indoor candles. The standard also determines the method used to measure sooting behaviour. The scope of the standard covers single-wick indoor candles with their diameter or other corresponding cross-section not exceeding 100 mm. Sooting behaviour is evaluated on the basis of the soot index. The mean soot index obtained on three samples must be less than 1.0 per hour, and no individual test may exceed 2.0 per hour.

Products not covered by the *SFS-EN 15493:2007* standard include candle lanterns and cake candles.

³ Practical tests have shown that, for example, gel candles made using narrow champagne glasses as containers break easily.

Candle lanterns:

The temperature of parts of indoor candle lanterns that the consumer is likely to touch when moving the product or that of the base, hanging hook or system or other supporting surface must not, during normal burning, become high enough to burn the skin⁴ or damage (for example, melt) the material used to hang the lantern or the supporting surface (such as a table). A supporting surface means a surface or part of a candle lantern that may be in contact with another material. The hanging system or part of a hanging system of a candle lantern intended for hanging must not become unattached or melt due to the impact of the heat created when the candle lantern is burning.

Candle lanterns must be designed and manufactured in a way that minimises the risk of lantern ignition, including through the appropriate choice of materials. Instructions regarding the candle type that can be safely used in the lantern must also be provided with lanterns. Candle lanterns must not break in tests referred to under subsection 3.6 below in a manner resulting in the candle being able to ignite its surroundings or pieces that come off the lantern or candle being able to pose a risk.

Candle lanterns must also enable safe lighting and preparation for use. For example, the lighting of tall and narrow stable lanterns may cause burns or the ignition of clothing if they can only be lit from the top. The attachment mechanism of stable lanterns that are lit from the bottom must be sturdy and safe to use.

Cake candles:

When alight, cake candles may not drip in a way that results in wax spillage into foodstuffs. Cake candles should be supplied with holders. Candle holders must meet the general requirements set for articles intended to come into contact with food under EU Regulation (EC) No 1935/2004 of the European Parliament and of the Council as well as product-specific requirements. Plastic candle holders must meet the requirements set in Commission Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food and their packaging must feature the wineglass and fork symbol or the words “for

food contact”. For more information visit the Finnish Food Safety Authority (Evira) website at <http://www.evira.fi/portal/en/evira/>.

3.4. CHEMICAL RISK FACTORS

In accordance with the interpretation of the European Chemicals Agency and the European Commission, candles are mixtures and the obligations set by chemicals legislation must be taken into consideration with them. Authorities overseeing compliance with chemicals legislation include Tukes, the Finnish Environment Institute (SYKE) and municipal chemicals supervision authorities.

3.5 LABELLING REQUIREMENTS

Labelling of indoor candle products must be in accordance with the requirements specified in section 2 of these guidelines. Labelling must be such that enables the safe use of the products by consumers. Indoor candle labelling comes under the standard *SFS-EN 15494:2007 Candles. Product safety labels*.

According to the *SFS-EN 15494:2007* standard, the labelling of indoor candle products must be provided using the symbols specified by the standard or as text. It is, however, recommendable that the symbols are also complemented with text until the symbols become commonly known by consumers. According to the standard, there are four mandatory and 11 optional safety information symbols and texts. The general warning sign determined by the standard must also always be used in conjunction with the symbols and texts.

Products not covered by the scope of application of the standard include candle lanterns and cake and novelty candles.

⁴ 60°C is regarded as a temperature that is found to cause a burning sensation.

Labelling requirements for certain indoor candle products**Labelling of candle lanterns:**

The labelling requirements specified in the *SFS-EN 15494:2007* standard can be applied to the labelling of candle lanterns. Lanterns must also come with instructions on the type of candles to be used in them.

Labelling of novelty candles:

- the term 'novelty candle' in accordance with commercial practice;
- a specification of the special property of the candle (such as that the candle cannot be extinguished by blowing out and/or that the candle relights after being blown out);
- instructions necessary for safe use (such as how to extinguish the candle);
- Otherwise the labelling requirements for candles must be applied where appropriate.

Labelling of cake candles:

- warning about the short burning period of the candle and/or a specification of the burning period if the burning period is less than 5 minutes;
- If a cake candle has a special property (such as that it sparkles or cannot be extinguished by blowing out), this must be mentioned in the package labelling.

3.6 TESTING

Candles that fall within the scope of application of the *SFS-EN 15493:2007* standard must be tested as determined by the standard. Other indoor candles can be tested by burning three samples of the product from the beginning until the end. In candle lantern testing, (commonly available) candles intended for candle lanterns, usually tea lights, must be used. When performing the tests, it must also otherwise be checked that the sample does not heat up so strongly that it cannot for safety reasons be moved or touched. A product must be rejected if one or more samples fail to meet the requirements set.

4 Candle products intended for outdoor use only

4.1 PRODUCTS

Outdoor candle products mean products intended exclusively for outdoor use, such as outdoor candles and torches, memorial candles and lanterns, oil and garden candles, container candles and floating candles intended for outdoor use.

4.2 FACTORS AFFECTING SAFETY

Equipping an outdoor candle with a non-flammable lid that partly covers the top of the candle is an efficient way of preventing a flare-up. Other factors affecting the occurrence of flare-ups include the material and size of the wick. Ash and debris may fall from certain wick materials, facilitating the occurrence of a flare-up. Glazing of ceramic containers prevents the candle wax from seeping through the container.

It is recommended that outdoor candles are not manufactured in types that become considerably lighter during burning. An outdoor candle that has become lighter in weight can cause a fire if it is blown by the wind near combustible materials (such as the wall of a building or dry grass).⁵

To prevent such a risk, it is recommended that appropriate sturdy stands in which candles can be placed be offered for sale in conjunction with outdoor candles.

4.3 STRUCTURAL REQUIREMENTS

Outdoor candles may not flare up. At the end of burning, when there is only a small amount of molten wax left, there may be a brief flare-up.⁶ The container of outdoor container candles may not maintain the fire.

No candle wax may seep through the container of container candles (such as ceramic ones).⁷

4.4 LABELLING REQUIREMENTS

Labelling of outdoor candle products must be in accordance with the requirements specified in section 2 of these guidelines. It is recommended that the general warning in accordance with subsection 2.2 of the standard *SFS-EN 15494 Candles. Product safety labels and warnings* be used alongside other labelling.

Labelling of outdoor candles, memorial, oil and garden candles:

- For outdoor use only. Do not use on a balcony or veranda.
- Only use on a non-flammable surface (never on a surface made of material such as plastic or wood).
- Only use in a non-flammable container or stand, in snow or sand so that the wind will not bring the candle in contact with flammable materials (applies to outdoor candles that become lighter in weight on burning).
- Specification of a safe distance from various structures. (For example: Keep at least 1 metre from any building, fence or other structure.)
- Do not move a burning candle or leave a burning candle unattended (does not apply to memorial candles).
- Do not burn the candle in the rain (risk of spluttering).
- Extinguish by snuffing out the flame.
- If an outdoor candle has a cover, the labelling must contain a reminder that for the safe use of the candle the cover must be in place when the candle is burning. Watch out for the hot metal cover (if applicable).
- Never leave matches inside the lantern when lighting it.

Large floating candles intended for outdoor use must be labelled with a warning that the candles must be anchored or placed in a spot where they cannot ignite surrounding materials when floating.

Instructions for outdoor candles should mention that outdoor candles should not be burnt on paths used by people. Outdoor candles may cause a risk of fire in items such as coats and, if tipped over, may cause burns.

4.5 TESTING

Outdoor candles must be tested by burning three samples of the product from the beginning until the end. A product must be rejected if even one of the samples fails to meet the requirements set.

⁵ In this section these mean products including outdoor candles molded in foil containers that may be easily moved by wind. Outdoor candles molded in heavier metal containers do not become as light when burnt out.

⁶ There may be a brief flare-up towards the end of the burning, provided that this does not pose any risk to the surroundings. This is evaluated on the basis of issues such as the duration of the flare-up and the height of the flame.

⁷ The seeping of candle wax through the container causes a risk of fire.

5 Decorative oil lamps and corresponding other products

5.1 PRODUCTS

Decorative oil lamps are vessels in which oil is burnt at wick to provide illumination. The primary purpose of decorative oil lamps is to create an atmosphere. Decorative oil lamps are used for decorative purposes in homes, restaurants, leisure facilities and other corresponding premises. Pressure oil lamps, such as Tilley-type lamps, intended for use as a primary source of light fall under the scope of application of the requirements set in the Pressure Equipment Directive (97/23/EC).

5.2 STRUCTURAL REQUIREMENTS

Decorative oil lamps must not pose a risk to consumer health or safety. The requirements set in the standard *SFS-EN 14059:2002 Decorative oil lamps. Safety requirements and test methods* apply to decorative oil lamps.

Oil lamps that are not ready for use at the time of sale (for example, where the wick is separate from the lamp oil reservoir containing oil) are regarded as lamp oil, which is regarded as a chemical and must be packaged and labelled in compliance with chemicals legislation.

Lamp oils are dangerous chemicals, and further provisions on them are laid down in chemicals legislation in Annex XVII to the REACH Regulation. For more information about the REACH restriction on lamp oil visit: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:086:0007:0012:EN:PDF>. Authorities overseeing compliance with chemicals legislation include Tukes, Finnish Customs, the Finnish Environment Institute (SYKE) and municipal chemicals supervision authorities.

5.3 LABELLING

Labelling of decorative oil lamps must be in accordance with the requirements specified in section 2 of these guidelines. The requirements set in the standard *SFS-EN 14059:2002 Decorative oil lamps. Safety requirements and test methods* also apply to their labelling. Decorative oil lamps must be labelled with information including a warning about the dangerousness of lamp oil and instructions on what to do if oil has been swallowed. Lamps must also come with a description of the operation of the oil lamp as well as instructions for their use and maintenance as well

as the warning to keep oil lamps out of the reach of children. The labelling must indicate the name, address and phone number of the manufacturer, importer or enterprise placing the product on the market as well as the number and year of the relevant standard. Because the above-mentioned standard was adopted before the standard on candle product labelling, it is recommended that labelling in accordance with *SFS-EN 15494:2002 Candles. Product safety labels* be used as appropriate, such as “Never leave a burning oil lamp unattended”.

Instructions on how to extinguish a fire should also be provided with decorative oil lamps. If a lamp overturns and its surroundings catch fire, the fire should be extinguished using, for example, a fire blanket. Water must never be used to extinguish lamp oil fires.

5.4 TESTING

Decorative oil lamps must be tested in accordance with the standard *SFS-EN 14059:2002 Decorative oil lamps. Safety requirements and test methods*. Tests included in the standard cover issues such as oil lamp leakage, stability and impact strength.

6 Burning mosquito repellents

BURNING MOSQUITO repellents include mosquito repellent candles, coils and torches.

Burning mosquito repellents are biocidal pesticides that fall under the chemicals and biocides legislation and are supervised by Tukes. Only products found in the register of authorised biocidal pesticides <http://www.tukes.fi/en/Branches/Chemicals-biocides-plant-protection-products/Biocides/>, (<http://bta.tukes.fi>) may be placed on the market in Finland.

The safety requirements and labelling instructions provided in these guidelines apply to burning insect repellents as applicable for the type of repellent.

Mosquito repellent spirals and coils must be labelled with the following warnings (in addition to those listed in section 2 of these guidelines and those required under chemicals legislation):

- Only burn on a non-flammable and heat-resistant surface.
- Never place in contact with flammable materials.
- Keep out of the reach of children.
- Specification of whether the product is intended for indoor or outdoor use.
- Extinguishing instructions.

The retail packaging of mosquito repellent spirals and coils should contain a sturdy stand to ensure they will not overturn when burnt.

7 Candle rings, chandeliers, candelabra, candlesticks and candle holders

ALL CANDLESTICKS and outdoor candle stands must be such in terms of their structure and materials that they will not tip over easily. The likelihood of tipping over must be tested by using the stability test of the candles standard (section 9.2 of *SFS-EN 15493:2007*). Candlesticks or outdoor candle stands must not catch fire or pose a risk even if the candle burns down fully. Candlesticks must be designed and manufactured in such a way that the candle is not in direct contact with combustion-supporting materials and that candles do not heat each other up (incl. not placed on top of or too close to each other). When testing candlesticks, candles must be burnt in each of their holders at the same time.

If a candlestick has a shade, the requirements specified in subsection 3.3 of these guidelines must be followed as regards shade flammability.

Wall-mounted candle holders must be designed in such a way that, when candles are burnt in them, they will not heat up any surrounding structures (such as a wall).

Chandeliers must come with instructions specifying the safe hanging distance from the ceiling and other structures measured from the longest point of a candle intended for use in the chandelier (such as the distance between the flame of the highest burning candle and the ceiling).

Candle holders attached to Christmas trees in which candles are burnt are not recommended for use because of the risk of fire involved. If these are, however, sold or otherwise supplied to consumers, such Christmas tree candle holders must be labelled as follows (in addition to the labelling specified in section 2):

- Never leave a burning candle unattended.
- Always keep fire extinguishing equipment close at hand.
- Keep out of the reach of children and pets.

Candle rings intended for candle products must be made from materials that do not maintain combustion. Safety can be improved through the choice of materials by favouring materials such as glass, metal and appropriate types of plastic and artificial fibre.

8 Candle gels and waxes sold to consumers

CANDLE GELS and waxes used by consumers to make candle products must be labelled in accordance with the requirements specified in section 2 of these guidelines. They must also come with instructions for use in which the safety and labelling requirements of these guidelines are taken into consideration. Candle gels and waxes must also be supplied with the following labelling:

- Do not place two wicks next to each other in candles.
- It is not recommended to use narrow or thin glass containers as molds for candles.

Candle gels must be labelled in accordance with the standard *SFS-EN 15494:2007 Candles. Product safety labels and warnings* (section 3.4).

9 Other products that constitute a fire hazard

THE LABELLING and instructions concerning products discussed in this section must be in accordance with the requirements specified in section 2 of these guidelines.

9.1 CIGARETTE LIGHTERS

Cigarette lighters fall under the scope of the safety and labelling requirements of the standard *SFS-EN 9994:2006 Lighters. Safety specification*. A reference of this standard was published in the Official Journal of the EU on 22 July 2006.

In Finland cigarette lighters are also covered by the Government decree on ensuring the child-resistance of cigarette lighters placed on the market and prohibiting the placing on the market of novelty lighters (780/2006). The sales and placing on the market of cigarette lighters that do not comply with the requirements set in the decree has been prohibited since 10 May 2007. The importer must provide the supervisory authority, at its request, with the technical specification and test reports on a lighter without delay. The decree is based on Commission decision (2006/502/EC) requiring Member States to take measures to ensure that only lighters which are child-resistant are placed on the market and to prohibit the placing on the market of novelty lighters.

A child resistant cigarette lighter is defined as a lighter that is designed and manufactured in such a way that it cannot, under normal or reasonably foreseeable conditions of use, be operated by children younger than 51 months of age because of, for instance, the force needed to operate it or because its design or the protection of its ignition mechanism, or the complexity or sequence of operations needed for the ignition. Requirements for child resistance and related testing methods are specified in the standard *SFS-EN 13869:2002 Lighters. Child-resistance for lighters. Safety requirements and test methods*.

The decree bans all cigarette lighters that resemble other objects than cigarette lighters. These include those the shape of which resembles cartoon characters, toys, guns, watches, telephones, musical instruments, vehicles, human body or parts of the human body, animals, food or beverages, or that play musical notes or have flashing

lights or moving objects or other entertaining features. The primary objective in this respect is to protect children.

Cigarette lighters and their parts are smoking accessories referred to in the Tobacco Act (693/1976) (decision of the Ministry of Social Affairs and Health on smoking accessories 1158/1999). Therefore cigarette lighters are covered by the restrictions on the sales and advertising of smoking accessories laid down in the Tobacco Act (incl. prohibition of their sale to persons under the age of 18). The sales and advertising restrictions are supervised by the National Supervisory Authority for Welfare and Health (Valvira).

9.2 MATCHES

The safety and labelling requirements for matches are presented in the standard *SFS-EN 1783:1997 Matches. Performance requirements, safety and classification*. There are no restrictions on the sales of matches, but it is recommended that staff at retail outlets pay attention to underage children buying matches or other fire starters and check their intended use.

9.3 LOG TORCHES

The requirements of these guidelines can, as appropriate, be applied to log torches (lumberjack's candles).

9.4 GARDEN TORCHES

Garden torches (such as bamboo and other corresponding torches) used in gardens and other locations must have a mechanism that enables them to be set up in a stable manner. If lamp oil or other corresponding fuel is used in them, the requirements of section 5 must be applied as regards safety and labelling (for example, two independent movements are required for the fuel container to open).

9.5 AIRBORNE LANTERNS

There are many uncontrollable risks involved in the use of lanterns that are freely airborne ("sky lanterns" or "flying lanterns") and these products are considered to pose a serious risk of fire. Freely airborne lanterns pose a serious risk because it is difficult, if not impossible, to make sure they will not get in contact with combustible materials. Because of their lightness, airborne lanterns may be transported by wind or air currents to buildings, trees, etc. Such airborne lanterns with a naked flame are regarded

as dangerous in the manner referred to in section 10 of the Consumer Safety Act (section 6 of Act 75/2004). Dangerous airborne lanterns may not be placed on the market.

9.6 SPARKLERS

These guidelines do not apply to sparklers as they fall under the scope of application of the explosives decree (473/1993). Fireworks falling under the explosives decree are supervised by Tukes.

9.7 DISPOSABLE BARBECUES

Disposable barbecues must not pose a risk to consumer health or safety. The surfaces of disposable barbecues that come in contact with food must meet the general requirements set for such articles under EU Regulation (EC) No 1935/2004. The requirements set in the standard *SFS-EN 1860-4 Appliances, solid fuels and firelighters for barbecuing. Part 4: Single use barbecues burning solid fuels. Requirements and test methods* apply to disposable barbecues. On the basis of experiences gained in supervision, disposable barbecues must have the following labelling in addition to those required by the *SFS-EN 1860-4 standard*:

- Do not use the barbecue indoors (risk of fire and carbon monoxide poisoning).
- Never place a disposable barbecue on anything flammable. The base of the barbecue gets very hot, and this causes a risk of fire.
- Always use the stand provided with the barbecue. Fit the stand in accordance with the instructions provided. Make sure the base of the barbecue is several centimetres above the surface you place it on.
- A disposable barbecue gets very hot. Do not move the barbecue when using it.
- Do not leave the barbecue unattended before it has cooled down properly, and make sure children and pets do not come into contact with the hot barbecue.
- Make sure the barbecue is fully extinguished by pouring plenty of water onto it, making sure the coals are fully covered.
- Do not place a disposable barbecue in a rubbish bin before you have made sure the contents have cooled down fully. Cooling down will take several hours.

9.8. FLUELESS –REPLACES

Flueless fireplaces (also known as decorative fireplaces, bioethanol fires, biofuel fires or bio-fireplaces) must meet the general safety requirements set in product safety legislation. This means their use must not pose a risk to consumer health or property. Particular attention must be paid to ensuring that the instructions for use and installation provided in Finnish and Swedish are appropriate, that the fireplace is installed in accordance with the instructions in an appropriate place, the fire is monitored during usage and switched off in the correct manner.

At least the following installation and user instructions must be provided with flueless fireplaces:

Installation

- The fireplace installation instructions must always contain sufficiently specific and detailed instructions on how to place the fireplace safely in the property.
- A fireplace must always be placed far enough from combustible materials such as curtains and other textiles. Combustible materials must never be placed on top of a fireplace.
- When installing a fireplace, the guidelines provided for the minimum floor area (m²) or volume (m³) of the room must be complied with.
- The installation instructions must be followed carefully when installing a fireplace.
- In addition to written instructions, the instructions must also contain illustrative pictures of the various stages involved in installation to make installation easier (this is particularly important for wall-mounted models).
- A sufficiently large fire-resistant panel must be mounted behind the fireplace unless the wall itself is made of a non-combustible material (this also applies to free-standing fireplaces).

Fuels

- Only fuels specifically identified for use in flueless fireplaces must be used in them.
- Sufficiently detailed user instructions must be provided for the storage and use of fuel (given in both the user instructions and on the container intended for fuel storage). Special attention must be paid in user instructions to the fact that fuel must never be added to a fireplace that is alight or still hot after use because of the risk of flaring.
- The user instruction must mention that the maximum quantity of flammable fuel stored in a home must not exceed 25 litres at any given time.
- Bioethanol is a highly flammable substance and must be stored in fire-safe location.

Using a fireplace

- When using a fireplace, it must be made sure that children or pets do not come into contact with the fireplace.
- The fireplace must never be unattended during use.
- Water or other liquid must never be used to put out the fire (risk of spluttering).
- A designated extinguishing tool should be used to put out the fire.
- Combustible materials other than fuel must never be placed in the fireplace.
- Fire extinguishing equipment should be kept near the fireplace.
- The premises should be aired thoroughly after using the fireplace.
- A free-standing flueless fireplace must be sturdy and well-balanced enough to prevent it from being knocked over if bumped into. This can be ensured either by using appropriate fittings to bolt the fireplace securely onto the floor or a wall or using some other safe method.

These instructions are based on legislation and the experiences gained in supervision by Tukes and the Consumer Agency as well as practical tests conducted with the Helsinki City Rescue Department.

10 Environmental factors related to candle products

THE MATERIALS and structures used in the manufacture of candles in plastic containers should, where possible, be such that can be utilised after use through recycling or in energy production.

The Finnish Environment Institute (SYKE) recommends that at least the properties required for classification of substances as hazardous to the environment should be taken into consideration in the use of flame retardants: biodegradability, bioaccumulation and aquatic toxicity. According to SYKE, those flame retardants the use of which has been restricted or that have been classified as hazardous to the environment should not be used in plastic candle containers. It also recommends that the flame retardant used in the product be mentioned.

11 List of legislation and standards to be applied

National legislation

ACTS:

- the Act on the Safety of Consumer Goods and Consumer Services (75/2004) From 1 January 2012 the Consumer Safety Act (920/2011)
- the Chemicals Act (774/1989)
- the Tobacco Act (693/1976)

DECREES:

- the Government decree on information to be supplied in respect of consumer goods (613/2004)
- the decree on dangerous products imitating foodstuffs (359/1991)
- the Government decree on ensuring the child-resistance of cigarette lighters placed on the market and prohibiting the placing on the market of novelty lighters (780/2006)
- the explosives decree (473/1993)

DECISIONS:

- the Decision of the Ministry of Social Affairs and Health on smoking accessories 1158/1999

EU legislation

- General Product Safety Directive (GPSD 2001/95/EC)
- the REACH Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
- the CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, amending, repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- Regulation (EC) No 1935/2004 on materials and articles intended to come into contact with food
- Commission Regulation (EC) No 10/2011 on plastic materials and articles intended to come into contact with food
- Directive 98/8/EC of the European Parliament and of the Council concerning the placing of biocidal products on the market

DECISIONS:

- Commission decision (2006/502/EC) requiring Member States to take measures to ensure that only lighters which are child-resistant are placed on the market and to prohibit the placing on the market of novelty lighters

STANDARDS:

- SFS-EN 15494 Candles Product safety labels.
- SFS-EN 15493 Candles. Specification for fire safety.
- SFS-EN 15426 Candles. Specification for sooting behaviour.
- SFS-EN 14059 Decorative oil lamps. Safety requirements and test methods.
- SFS-EN ISO 9994 Lighters. Safety specification.
- SFS-EN 1783 Matches. Performance requirements, safety and classification.
- SFS-EN 1860-4 Appliances. Solid fuels and firelighters for barbecuing. Part 4: Single use barbecues burning solid fuels. Requirements and test methods.



HELSINKI P.O. BOX 66 (Opastinsilta 12 B), FI-00521 Helsinki, Finland

TAMPERE Kalevantie 2, FI-33100 Tampere, Finland

ROVANIEMI Valtakatu 2, FI-96100 Rovaniemi Finland

TELEPHONE +358 10 6052 000 | www.tukes.fi

