

## Fire and Life-Safety Group (FLS)

# Candle Safety Requirements and Recommendations

### Candle Fire Statistics

From the National Candle Association ([www.candles.org](http://www.candles.org))

According to U.S. Fire Administration (USFA), the soaring popularity of candles has led to an increase in reported candle fires. The USFA currently estimates that candles are responsible for approximately 10,000 residential fires each year, along with 1,000 civilian injuries, 85 fatalities and \$120 million in property loss.

Estimates based on 1994-1998 data from USFA's National Fire Incident Reporting System, and the National Fire Protection Agency, suggest that candle fire incidents occur most often in the bedroom (44.5%); followed by the living room, family room or den (18.6%); the bathroom (11.4%), and the kitchen (7.2%). Materials most often ignited by candles were mattresses or bedding (12.8%); cabinetry (10.1%); and curtains, blinds or draperies (8.4%).

Notably, the bulk of these candle fire incidents were directly related to consumer inattention to basic fire safety or to the misuse of candles. Nearly 40 percent of residential candle fires reportedly occurred because candles were unattended, abandoned or inadequately controlled. In addition, nearly 20 percent occurred because a combustible item was placed too close to the candle. The leading causes for residential candle fire incidents were reported as follows:

Candle unattended	19.3%
Too close to combustibles	19.1%
Candle misuse (unspecified)	11.4%
Inadequate control of flame	10.2%
Child playing	8.7%
Abandoned material	7.4%
Falling asleep	4.5%

### Candle Safety Guidelines (In Campus Buildings)

- FLS strongly discourages the use of candles in campus buildings. Contact FLS and obtain a permit before using candles in a campus building.
- Candles are prohibited in places of assembly unless a permit is obtained. For additional information please refer to the following link from FLS' website, which covers Open Flame Requirements for Assembly Occupancies, Conferences and Exhibits.

<http://fm.colorado.edu/firesafety/conferences.html>

- Always keep a burning candle within sight. Extinguish all candles when leaving a room or before going to sleep.
- Never burn a candle on or near combustible materials. Keep burning candles away from furniture, drapes, bedding, carpets, books, paper, flammable decorations, etc.
- Keep candles out of the reach of children and pets. Do not place lighted candles where they can be knocked over by children, pets or anyone else.

- Read and carefully follow all manufacturer instructions.
- Trim candlewicks to 1/4 inch each time before burning. Long or crooked wicks cause uneven burning and dripping.
- Always use a candleholder specifically designed for candle use. The holder should be heat resistant, sturdy and large enough to contain any drips or melted wax. Be sure the candleholder is placed on a stable, heat-resistant surface.
- Keep burning candles away from drafts, vents and air currents. This will help prevent rapid, uneven burning, smoking and excessive dripping. Drafts can also blow lightweight curtains or papers into the flame where they could ignite. Additionally, ceiling and freestanding fans can cause air currents and candles should not be placed nearby.
- Keep the wax pool free of wick trimmings, matches and debris at all times.
- Do not burn a candle for longer than the manufacturer recommends.
- Always burn candles in a well-ventilated room. Fragrances and chemicals emitted by candles can be toxic.
- Extinguish the flame if it comes too close to the holder or container. For a margin of safety, discontinue burning a candle when 2 inches of wax remains (1/2 inch if in a container). This will also help prevent possible heat damage to the counter/surface and prevent glass containers from cracking or breaking.
- Do not touch or move a candle when the wax is liquid.
- Extinguish pillar candles if the wax pool approaches the outer edge.
- Candles should be placed at least three inches apart from one another. This is to be sure they don't melt one another, or create their own air currents that will cause the candles to burn improperly.
- One of the safest ways to extinguish a candle is to use a candlesnuffer, which helps prevent hot wax from spattering.
- Do not extinguish candles with water. The water can cause the hot wax to spatter and can cause glass containers to break.
- Do not use candles during a power failure. Flashlights and other battery-powered lights are much safer light sources than candles.

### **Candleholders and Devices**

(Based on section 308.3.1 of the 2009 edition of the *International Fire Code* (IFC))

- Class I and Class II liquids and LP-gas are not to be used in candles or open-flame devices.
- Devices or candleholders must be designed to prevent spillage of fuel or wax.
- Devices or candleholders must be designed to return to the upright position when tipped at less than 45 degrees from vertical. Alternatively, the device or candleholder is to self-extinguish when tipped over.
- Flames are to be enclosed except where openings on the side are more than 0.375 inch diameter or where openings are on the top and the distance to the top is such that a piece of tissue paper placed on the top will not ignite in 10 seconds.