



DRAFT
CANDLE FIRE SAFETY
ANALYSIS AND RECOMMENDATIONS

Consumer Product Safety Task Force
National Association of State Fire Marshals

REQUEST FOR COMMENTS

The Consumer Product Safety Task Force of the National Association of State Fire Marshals (NASFM) seeks public comment on the following analysis and recommendations pertaining to the health, safety and environmental impacts of candles sold in the US. This document will receive wide distribution. All constructive written comments are welcome if received at NASFM headquarters, 1245 Farmington Ave., Suite 101, West Hartford, CT 06107 (Tel: 860-676-3070) by close of business, March 16, 2001. Facsimile transmissions or e-mails will not be accepted.

Once all comments have been received and thoroughly assessed, a proposal will go forward to the NASFM Board of Directors for action.

Authorized by Donald P. Bliss, *Task Force Chairman*

BACKGROUND

✍ According to industry sources, about 200 American companies – and countless small craft producers – manufacture candles. Their collective consumer retail sales currently exceed \$2.3 billion annually, with annual growth rates now well above 15%.

Candles are used in more than 70 percent of all US households. More than 96% of all candles sold in the US are bought by women. Candles are featured in catalogs and advertisements, often to depict other products in positive settings.

✍ The "1997 Residential Fire Loss Estimates" recently released by the US Consumer Product Safety Commission (CPSC) reports that civilian deaths due to ignition by a candle numbered 220 in 1997¹ - an 83% increase over 1996, when civilian deaths

¹ If incendiary and suspicious fires are excluded, the number of fire deaths due to candle ignition drops to 210 in 1997.

attributed to candle ignition were reported at 120 by the CPSC. In a report released October 28, 1999, Dr. John Hall of the National Fire Protection Association noted that fire deaths and injuries were at an 18-year peak in 1997 – the most recent year of data available at the time. Property damage as a direct result of candle fires reached \$170 million, Hall added.

Some experts believe that candle safety will improve if wicks do not extend the full length of a candle – with perhaps a 1/4 inch margin of wax left at a candle's bottom. Such candles would self-extinguish, thereby helping to address the fairly common problem caused by consumer carelessness. We could find no public disagreement with this concept.

- ✍ Health and environmental experts also have raised concerns about candles. The Journal of the American Medical Association (Vol. 284 No. 2, July 12, 2000) published a letter from Public Citizen's Health Research Group expressing concerns about air emissions from the lead used to stiffen some candlewicks. The letter noted that in spite of a voluntary commitment by candle manufacturers not to use lead in wicks, independent testing revealed that the practice has continued. The Environmental Illness Society of Canada has issued a similar warning related not only to lead emissions but also to some 19 other toxic emissions from burning candles. Technology appears to exist to lessen emissions. Such companies as the CW Group, located in Oakland, CA, offer “soot-free” Clean Wax.TM
- ✍ Members of the National Candle Association are addressing some of these concerns through the ASTM F15.45 Candle Products Subcommittee. In a letter to NASFM's Don Bliss, dated August 30, 2000, James J. Becker, the chair of that subcommittee, expressed frustration with the slow pace of the ASTM process but promised renewed effort.
- ✍ The key elements of NASFM's philosophy on consumer product fire safety are as follows:
 - ✍ Fire safety standards should be based on real-world scenarios and good science.
 - ✍ Simultaneously high levels of safety, health and environmental quality should be sought. All are important.
 - ✍ Voluntary standards are preferable but industry tends to favor mandatory standards to achieve a level competitive playing field.
 - ✍ Consumer misuse of products must be addressed through public education, labeling and guidance to advertisers. However, some level of consumer carelessness is a given. Products must be designed to anticipate and mitigate against the most prevalent of human errors.

RECOMMENDATIONS

The Task Force recommends the following policy:

1. Express NASFM's appreciation to Mr. Becker, chair of the ASTM F15.45 Subcommittee, for his leadership in getting the industry to begin addressing fire performance issues. In recognition of the fact that this subcommittee may not itself consider fire performance issues, NASFM and its allies should take the following actions.
2. Propose the immediate adoption of the following *interim* candle safety standard by manufacturers, retailers, procurement agencies and, on a mandatory basis, state and local jurisdictions with the authority to do so. The standard shall read, "All candles for sale and distribution in [jurisdiction or organization] shall be made with non-leaded wicks which terminate not less than 1/4-inch from their base. Candle holders, both those that are integral with a candle and those that are manufactured and marketed separately, must be non-combustible."
3. Petition the US Consumer Product Safety Commission to adopt the interim standard described above, pending completion of the project described at item 4 below.
4. Under the supervision of the Science Advisory Committee (SAC), establish a NASFM Research Consortium to seek, fund and oversee scientific research into the safety, health and environmental impacts of burning candles; and the development of safety, health and environmental test methods and standards for candles sold in the US. Appoint SAC member James Hoebel as project coordinator. In keeping with NASFM policy, the Consortium shall consist of invited members representing the following interests:
 - a) Candle manufacturers. *Example:* American Greetings.
 - b) Materials suppliers. *Example:* wax and additives producers, candle holder manufacturers.
 - c) Innovators. *Example:* CW Group.
 - d) Retailers. *Example:* IKEA, Pier One.
 - e) Manufacturers of items ignited by candles, e.g., home furnishings, computer equipment, etc. *Examples:* Serta, Dell Computer.

The Consortium will be directed to draft a request for proposals (RFP); circulate the RFP to the National Institute of Standards and Technology, SP Swedish National Testing and Research Institute and other qualified research and testing facilities approved by the NASFM Board of Directors; secure and assess all responses to the RFP;

recommend the best proposal; assist the Board in securing funding for the work; and oversee and report no less than quarterly on the project as it progresses.

5. The results of the research will be provided to the CPSC to support the adoption of a final mandatory standard.
6. In cooperation with NFPA's Risk Watch program and selected retailers, develop the following:
 - a) Voluntary code for responsible candle promotion, to include guidelines on the depiction of burning candles near combustibles such as upholstered furniture, mattresses, drapery, textiles, IT equipment, etc.
 - b) 2001 Holiday Season candle safety messages for use by major print and electronic media.
 - c) Placement of candle safety spokespersons on the major family-oriented talk shows. Seek support of Martha Stewart.
7. Assign the Arson and Fire Investigation Committee to develop a protocol for the investigation of candle fires, to improve the quality and timeliness of the data pertaining to these fires. Conduct regional training sessions for fire investigators.
8. In cooperation with the National Candle Association and the National Ad Council, conduct an assessment of the various candle safety labels in terms of their effectiveness as consumer communications devices. Jointly develop, propose and promote a model label for use by all calendar retailers.