

AMERICAN SOCIETY FOR TESTING AND MATERIALS

SUBCOMMITTEE FOR CANDLE PRODUCTS (45) OF F-15 COMMITTEE ON CONSUMER PRODUCTS

Caribe Royale Resort, Orlando, Florida
Friday, April 23, 2004

Minutes

Chairman Jim Becker, of Candle Solutions, called the meeting to order at 8:30 AM. Jim extended a special welcome to guests from ALAFAVE and the European Candle Association. Persons in attendance introduced themselves.

Approval of Minutes

The minutes from the Subcommittee meeting in Seattle, Washington on September 26, 2003 were reviewed and approved on a motion duly made and seconded.

Approval of Agenda

A presentation by Michael Matthai was added to the agenda. It was noted that Jim would present the report on data evaluation, and that Bob Moss would present the report from the Task Group on Smoking. Changes to the agenda were made without objection.

Membership Report

Jim Becker presented the report. The Subcommittee has 80 voting (32 Producers, 5 Consumer, 43 General) and 19 non-voting (5 Producer, 11 General, 3 Unclassified) members. Several members are currently unpaid. Attendees were asked to check the Subcommittee membership roster for any necessary address corrections.

European Candle Standards

Michael Matthai of Sasol Wax and the European Candle Association presented a discussion on candle standards available and under development in Europe. Standard CEN BT/TF 164 on Candle Fire Safety is being developed. The standard covers soot index, safety specifications and safety signs and warnings. Candle sooting is stated as the most important quality requirement for the consumer. Michael presented a slide showing soot measurement equipment. Safety specifications included are flame size, candle stability, wax pool temperature, container temperature, self extinguishing and secondary wicking. Due to language differences in Europe, pictograms are essential for warnings. Included warnings are to never leave candles unattended, burn out of reach of children and pets, keep away from flammables, and a minimum distance between candles. Ideally, work by ASTM and in Europe can eventually lead to a set of internationally accepted standards. Michael will distribute the presentation via e-mail to Jim. Jim

commented that he is encouraged by the similarity of the beginning intentions of the European committee to this Subcommittee's work to date.

Fire Data Evaluation Task Group

Jim Becker presented the report. No new data is available to the Subcommittee, but Jim Hoebel, a member consumer, reported on recent developments. The Subcommittee has previously seen data from NFPA (National Fire Protection Association) and NFIRS (National Fire Incident Reporting System), the latter from the US Fire Administration. NFPA data indicates the total number of fires, while NFIRS examines a subset in greater detail and extrapolates to the larger population. NFIRS is changing the data collection system, which will eventually provide better data, but the change causes comparison problems with previously reported data because coding for product categories is different. However, the data being collected for candles is, according to Jim Hoebel, not significantly different than previous data. Unofficially, comparison of trends between old and new data should be acceptable.

George Pappas of Lumi-lite Candles, participating via teleconference, asked if the data is different and we are to be data driven, what yardstick should be used to measure actual changes? Jim Hoebel believes the data that has been used is good, and that we should continue to review data as previously. George asked if it would be better to use NFPA data rather than data from NFIRS. Jim Hoebel indicates that the NFPA data looks at total fires and does not collect specific information on candle fires. Bob Krulik of Root Candles asked in what year the data change will first appear. Jim Hoebel indicates some states collect data the old way, and some the new, and it will likely be 2005 before most states are collecting under the new system. Jim Becker asked Allyson Tenney of CPSC when the Subcommittee could expect later data than for 1999. She hopes that data for 2000 may be available by the end of this year or shortly afterwards. J.C. Edmunds of General Wax and Candle asked about emergency room data. Jim Hoebel indicates this data is collected by CPSC, and views it as an adjunct to NFIRS, but the data is not particularly helpful for extrapolation to all fire data since it reports all injuries, not just fires. J.C. asked if the NEISS raw data is available, since we would be interested in all injuries related to candles, and Jim Hoebel indicated it should be available from CPSC.

Terminology Task Group

Eileen Hedrick of Belmay presented the report. She recognized the Task Group members. Eileen summarized the history of ASTM F 1972, the candle terminology standard, which was approved in 1999 and is currently up for 5-year review. The end of useful life and capillary action definitions from ASTM Provisional Standard PS 59 will be added to F 1972 revisions. Many terms as previously defined in F 1972 continue to be acceptable. Definitions for freestanding candle and tealight candle are proposed to be changed. George asked about the propriety of putting candles on accessories, which, as defined in the current draft, are not required to be heat resistant or non-flammable. This issue is being discussed by the Fire Safety Task Group. Steve Russell of Cargill asked about changes to the wax definition, which should be changed to further include other

mineral waxes, such as ozokerite. Ed Calcote of Shell read a definition proposed by the ASTM Wax Subcommittee D02.10 with which Steve is satisfied. Other modified definitions include that for gel candle. Keywords are being added to the standard. The final draft will be submitted to NCA lawyers to be certain that proposed changes do not complicate trade issues. There was discussion on the definition for votive candles, and Jim Becker asked the Subcommittee to provide feedback to the Task Group on possibly adding dimensions to the definition of votives. Carl Hudson of ExxonMobil expressed concern that placement of dimensions would limit producer creativity, and the sense of the Subcommittee was that this was true. The definition will continue to be proposed without further modifications. Barb Miller of NCA suggested putting pictures of products in the standard, similar to some ANSI standards.

Smoking Task Group

Bob Moss presented the Task Group report. The Subcommittee finding of non-persuasive for the negative vote received on the most recent ballot of the proposed visible emissions method was upheld by F15, so the method has been approved as ASTM Method F 2326. Bob recognized members of the Task Group instrumental in the development of the standard, and the early input of Dr. Schutz from Europe was recognized by George. Bob reminded the Subcommittee that there are no pass/fail criteria in the method, as it is to be used for data collection and comparison of candle systems.

Fire Safety Task Group

Jim Becker presented the report. The revision of Candle Fire Safety Standard PS 59 is ready for balloting, pending any action coming from this Subcommittee meeting. The performance requirements included in the standard of flame height, secondary ignition, end of useful life, and stability were summarized.

Eileen commented that she would like to remove the definition for end of useful life from the terminology standard so that the same definition is not being balloted twice. Linda Allison of S.C. Johnson expressed concern that several of the Terminology definitions are contained in the Fire Safety standard. The Task Group has taken the position that it would like the definitions to be in PS 59, for clarity. This causes a problem of potentially different definitions in two standards. Carl and Eileen also expressed an opinion that it would be better to remove the definitions from the safety standard. Carl moved to have the Task Group reconsider its position and remove the definitions. The motion was seconded. The Subcommittee voted 20 yes and 1 no, with 7 abstaining. The Task Group will reconsider at its meeting this afternoon.

It was noted that the end of useful life requirement will be extended to freestanding candles. It was also noted that changes in the burn test procedure are proposed compared to PS 59. Tealights are to be burned to completion, and gel candles are to be burned for 8-hour cycles. A note on "more stringent testing" is to be included, allowing use of method modifications if they are at least as rigorous as the standard method. Jim Hoebel

suggested extending the "more stringent testing" note to the stability test. Andrew Leach of S.C. Johnson notes that the standard already suggests the 10-degree tilt specification is a minimum requirement. The Task Group will reconsider, with Subcommittee approval, extending the more stringent testing provision to other test sections as well.

Rich Signorelli of Belmay brought up the problem of mixed matrix (gel/wax) candles and whether the 8-hour burn provision would apply to them. The method states the provision applies to "gel containing" candles. Linda seconded the concern. Others feel that further wording in the standard is inclusive of the situation. It was asked if "gel" is defined in the standard - it is not. Rich agrees that the sense of the standard covers the situation, but the wording could be stronger for emphasis.

The document was reviewed in more detail. A section 1.6 needs to be added to include the normal caveat for ASTM fire safety standards, but was missed for inclusion in PS 59. This forces the need for a reference to ASTM Standard E 176 in the referenced documents, which includes definitions related to fire safety, including some separately defined in our standard.

Correspondence received from Marcelo Hirschler of the Subcommittee suggested other changes, as well. In section 1.2, he suggested changing "should be in place" to "critically need to be in place". Jim Hoebel suggested simply using "must". Bob Moss explained the Task Group had previously rejected "shall" because the items are not in the control of the Subcommittee. George suggested adding a reference that these are necessary "consumer practices". The Subcommittee is generally agreeable to this combination, with only David Morrison of Penreco expressing some concern, but which would not prompt a negative vote on his part.

In Section 3.2, Marcelo suggests "Definitions specific to this standard". Carl suggested that current wording is acceptable ASTM protocol.

In Section 4.2.1.1, Marcelo suggested changing "may result in damaged candles" to "has the potential to result in damaged candles" in the 2nd sentence. It was the sense of the Subcommittee that the variations say the same thing.

In Section 5.2.3.1, Marcelo suggested changing "should" to "shall" or to "Wear safety glasses at all times." Rich suggests "must". CPSC indicates that use of "shall" or "must" would represent non-compliance if not followed. George suggested potential legal liability if the method requires safety glasses and the requirement is not also included as part of the labeling for use of candles. Considerable discussion ensued. Rob Harrington of Blyth suggested a statement to the effect of following standard laboratory testing protocol. Eileen suggests that wax splashing into eyes is the hazard, not wearing safety glasses. The Task Group will further consider the situation. Similar suggestions along these lines were made for other sections, and will be individually considered.

In section 5.2.4.7, Marcelo suggested adding "while taking care not to get too close to the flame" to the last sentence. Rob suggested that highly trained technicians are aware that flame is hot!

In section 5.3.2, Marcelo suggested changing "The plane may need a stop" to "The plane will potentially need a stop." The sense of the Subcommittee is that there is little difference between the variations and that the current wording is acceptable.

Jim Becker went through the standard for further comment from the Subcommittee. There was further discussion on section 1.2. The sense of Subcommittee is to leave wording as "should" and deal with the votes received on ballot. It was noted that, in section 2, references to sampling plans have been dropped. Jim Hoebel wants to compare the definition of flashover, which is a total fire involvement as understood by the fire profession, to that in 3.2.13. There was discussion that candle professionals currently understand our limited use of the term. It was suggested to say "candle flashover" wherever the term "flashover" is currently used. The Subcommittee is agreeable with this change.

Geoffrey Faires of Dial is concerned that tapers could be interpreted to fit into the definition of freestanding candle contained in Section 3.2.9. The definition is to be removed by Subcommittee directive, and the Subcommittee is not concerned with the definition as it exists in the Terminology standard. However, George also expressed concern, and this may be addressed further by the Terminology Task Group.

Ed provided rationale for the 10.0 degree angle specified in the Standard, as a question was raised in a note passed to him as to the need for the specified accuracy.

George questioned in Sections 5.2.4.1 and 5.3.3.1 whether the Task Group's intention for removal of labels is accurately represented by the statement. He is also concerned that there are already a number of requirements for label verbiage, without unnecessarily adding words on label removal. The issue will be further discussed by the Task Group.

Jim Becker explained that the Task Group has not been able to replicate problems with gel candles that seem apparent from the fire data. The appendix was added to the Standard in order to try to address the apparent problems without putting undue testing requirements on the gel-producing community.

The Task Group will review recommended changes. The Subcommittee should expect to see the standard in a ballot in May. Jim Hoebel suggested that the Subcommittee should request concurrent balloting with F15 and F15.45. Depending on the number of negative votes received, it may be necessary to call a special meeting of the Subcommittee separate from the NCA September meeting.

Bob Moss reported on Task Group activities toward a candle accessories specification. It is currently envisioned as a provision for flammability testing. Although a gas flame has been suggested as the ignition source for the method, the Task Group has decided that a

candle should be specified, as this would be the ignition source for accessories in actual use. The Federal Hazardous Substances Act (HSA) specifies a 5-second flame exposure – the Task Group is suggesting 60 seconds as a more rigorous test. As specified in ASTM F 963, a minimum of four samples must be tested, and a failure of one of these requires testing of ten additional samples. The flame spread rate is still an area of contention. Suggestions have ranged from no ignition being allowed to a maximum flame spread of six inches per minute being permissible. The Subcommittee was asked to provide feedback on flame spread with stated rationale to Bob or Jim Becker.

There will also be a requirement for tilt stability (10 degree) and for candle burner accessories. For the latter, a flame height specification is required. Andrew questioned if this was actually a tealight problem. It was pointed out that tealights used for the testing will need to be qualified. Bob Krulik questioned how the buildup of soot on a burner over time can be addressed. Unfortunately, there is no current answer. John Baker of Pier 1 asked Andrew if there is a British standard for burner design. Jim Becker believes there may be confusion of the study where the problem was discussed with an actual standard.

New/Old Business

There is no old or new business to discuss.

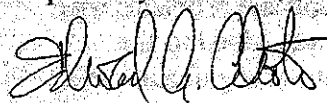
Next Meeting

The next currently scheduled meeting of the Subcommittee will be in Washington, DC at the Omni Shoreham Hotel on September 24, 2004. However, membership should look for meeting notices in the interim in case a special meeting is required.

Adjournment

The meeting was adjourned on a motion made and seconded at 12:50PM.

Respectfully submitted,



Edward A. Calcote
Secretary, Subcommittee F15.45