

IEC TC111 and the Ban on PTFE: Update

When Steve Tisdale and I last wrote about this subject, TC111 of the International Electrotechnical Commission (IEC) and the ad hoc group, PT63031, was preparing a draft of a standard that would effectively ban PTFE (polytetrafluoroethylene) materials from electronics. As history goes, the electronics industry has focused on only two of the four halogens (bromine and chlorine) to be limited in order to be called “halogen-free” or more accurately “low-halogen.” But now, fluorine was being dragged down too, just because of its location in the periodic table.

The latest committee draft of this standard was circulated for a vote by each affiliated country's National Committee with the closing date for comments being September 15, 2017.

The second round of voting resulted in about 305 comments once again, which is a large number at this stage of the standards development process. The comments were tabulated and were discussed at an interim meeting that was held for three days in Tokyo at the end of October 2017. As a summation of the comments, these were the conclusions that could be drawn from the 305 comments:

- The 0.9% maximum total halogen content in a CCL or PWB was removed
- Halogens are still defined as chlorine, bromine, iodine and fluorine
- The document now points to Categories 1 and 2 in an IEC data base:
 - IEC 62474 Data Base Category 1—Materials banned by legislation
 - IEC 62474 Data Base Category 2—Materials where legislation pending
 - IEC 62474 Data Base Category 3—Materials where market conditions dictate that the chemical be banned

Category 3 was removed as one of the criteria for inclusion by the PT experts in attendance at the Tokyo meeting. The net result was that the proposal was pretty well gutted as far as the effect on PTFE was concerned. The logical thing at this point would have been to just continue to rely on the PAS document based on JEDEC 709 and expand the scope to include electrical materials/products.

Results of the Tokyo Meeting

The PT63031 leadership team proclaimed that there were not enough countries and experts present in Tokyo to make such a decision. Therefore, the activity was reduced to the modification of the title and scope of the endeavour. After three days of discussion the newly proposed title and scope are as follows:

New Title: *“Definition of Low Halogen Materials of Environmental Concern for Electrical and Electronic Products”*

New Scope: *This International Standard defines low halogen materials of environmental concern. For the purpose of this document, “environmental concern” relates to the substances listed in Annex “XX.” Annex “XX” lists all Criteria 1 & 2 halogenated substances from the IEC 62474 database on material declaration (IEC 62474 DB).*

The scope of this document is limited to polymeric, non-metallic and non-ceramic materials including their additives for use in electrical and electronic products.

Materials that are used during processing, in product delivery systems, or in product packaging (i.e., shipping materials), which may contain any form of halogens but do not remain within the product are not in the scope of this document.

What's next?

A survey has been sent to all the PT63031 experts. In it are two questions that can be answered simply yes or no. The first is to accept or reject the proposed title and scope. The

second is whether the new title and scope should be sent to the TC111 National Committees (NCs) for a vote as to whether they would accept or reject the new title and scope.

Separately, there is also a question as to whether or not this title and scope change would require a separate New Work Item Proposal for the development activity which would need to be accepted once again by the National Committees.

The voting period on this survey ends on January 19. The results of the voting will be discussed at another PT63031 meeting in Stockholm Sweden on March 15-16, 2018.

In Summary

There is very little consensus within TC111 nor PT63031 regarding the objectives of the development activity. Many of the participants in the PT63031 meetings, who have paid significant amounts of money to travel and man-days worth of time, want to stay with the provisions of the PAS document and expand the scope to include electrical materials/products. The leadership team of PT63031 emotionally want to publish something beyond the requirements of the PAS document, citing unpublished reports of damage to health and environment.

The bottom line is that, as life-long contributors to the electronic standards development process, we must continue to participate in these meetings to make sure science prevails.

References:

1. International Electrotechnical Commission, information on IEC TC 111.
2. IPC white paper: IPC-WP/TR-584A, final draft May 2007.
3. IPC/JEDEC STD-709 (copy of proposed standard for ballot, reference only, since revised).

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