

PINFA ADVISORY MEETING

WEDNESDAY, 15TH MARCH 2017

10:00 – 16:30 CET

BRUSSELS

PARTICIPANTS

External participants

- Ellis-anne Dunmall, *Policy Implementation Manager, UK Government Department for Business, Energy and Industrial Strategy - United Kingdom*
- Jesper Gruvmark, *Chemical Engineer, Danish Environmental Protection Agency - Denmark*
- Frank Kuebart, *Managing Director, Eco-INSTITUT - Germany*
- Pim Leonards, *Chair Environmental Bioanalytical Chemistry, Vrije Universiteit Amsterdam - Netherlands*
- Miguel Rejat, *Inspector, Generalitat De Catalunya Fire Brigade - Spain*
- Christopher Smith, *Policy Advisor, UK Government Department for Business, Energy and Industrial Strategy – United Kingdom*

Pinfa participants

- Adrian Beard, *Chairman, Pinfa - Germany*
- Vicente Mans, *Advocacy Manager, Pinfa – Spain*
- Philippe Salémis, *Secretary General, Pinfa – France*

External moderators

- Simon Levitt – *moderator, Harwood Levitt Consulting*
- Giacomo Borgo – *assistant moderator / writer, Harwood Levitt Consulting*

PURPOSE OF THE PINFA ADVISORY MEETING

- Pinfa represents the manufacturers of phosphorus, inorganic and nitrogen flame retardants (PIN FRs) and is a Sector Group within Cefic, the European Chemical Industry Council. The members of Pinfa share the common vision of continuously improving the environmental and health profile of their FR products. Therefore, pinfa members seek to maintain a dialogue with the users of PIN FRs to identify their needs and technologies they are looking for.
- In recent years, there has been much discussion and debate about FRs. There have been concerns raised about environmental impacts, largely but not solely about halogenated FRs. In cases where FR use is decreased, there are concerns about fire safety. Where are FRs critical for fire safety, where can other solutions be sufficient?
- The aim is to bring together the group on average twice a year. It is not a fixed group, Pinfa will invite additional participants if they are interested to attend.

- The participants will have formal positions in their organisations, but pinfa's intention is for the meeting to be a discussion between the individuals, not a stating of the formal positions of those organisations

THE CHATHAM HOUSE RULE

The meetings follow the Chatham House rule, whereby minutes include who attended and what was discussed, but opinions are not attributed to individual participants.

ISSUES FOR THE ADVISORY GROUP TO DISCUSS

The participants identified a number of issues that could be further discussed in future meetings. The issues are opportunities or challenges related to fire safety and flame retardants, in the spirit of the 'safe space' for discussion above. The idea is to capture them in this document for reference in future meetings, even if not all issues were addressed in this first meeting.

The issues are as follows.

FRs do indeed have a bad image with many people, and this has spread beyond halogenated FRs. According to several participants, the negative perception of halogenated FR remains, but there is a wider negative perception of FRs generally. This view is held to different degrees by policy-makers, the public and others. Several participants of the meeting had the view that this perception spreading from halogens to all FRs was not based on specific evidence or at a particular time, rather it has developed slowly driven by media coverage, either gently prodded by opponents such as the furniture industry, or a more innocent dropping of the word 'brominated' in media coverage.

The participants discussed the need for work to be done to address this, to talk to policy-makers and others, because the perception is much worse than the reality. However, in order for these communications to be effective, there needs to be a strong basis of evidence, both on fire safety that FRs make a meaningful contribution, and on the environmental and human health profiles of alternatives to brominated flame retardants.

Therefore, the other issues are focused on fire safety and the contribution of FRs, and the environmental / human health profile of FRs.

ISSUE ONE: FIRE SAFETY, AND THE CONTRIBUTION OF FLAME RETARDANTS

Fire-fighters are noticing fires are spreading more quickly. A number of participants believed there is a problem with how quickly fires are developing once they have started, in some cases fires can reach flashover and temperatures of 480 degrees within 5 minutes.

Fire brigades have a typical target response time to arrive at a fire within 10 minutes. Because flashover has often already happened, people are trapped, and fire-fighters are seeing fatalities because the fires are developing too quickly. In one region represented in the room, fire fatalities have increased by 50% in the last year.

Some of the participants noted the two problems were the lack of escape time created by the speed of fire development, and the rapid smoke build-up at the same time, which is what impacts people first.

This is seen as more of a problem in people's homes where there are not the higher fire standards of public buildings.

Reasons discussed for this increase in fire speed were the accumulation and composition of consumer products in homes, different regulations in different European countries, and regulations not being followed.

Agreement that FRs slow down fires, at 'micro' level.

It was discussed that FRs do indeed what they claim to do, both stopping some fires from starting, and slowing down the speed of development if a fire does start. Both are important, it was the slowing down that was especially noted, given the discussion about flashover times above.

It was also discussed there is some communications value in videos which compare the fire growth in rooms with and without FRs. However, the group agreed that such videos and communications at this 'micro' level do not on their own change attitudes about fire safety and flame retardants, because of the 'macro' level lack of consensus described next.

Lack of consensus in Europe that FRs save lives in fires, at 'macro' level.

There is a key issue that the observations of fire-fighters or the video evidence of fire spread above, do not alone convince a policy-maker to focus on the fire safety of consumer products or ensure that FRs are not removed. Policy-makers want to see that this 'micro' level translates into lives saved, and this is notoriously difficult to prove.

There is the old problem that fire deaths and injuries are recorded differently in different countries; fire investigations look for ignition sources but don't often look for the elements of fire load that turned a small fire into a killer fire; and other issues.

Some participants noted that the UK regulations on upholstered furniture should be providing more of an answer. The time period from 1988 till 2017 is a sufficient time period for statistically significant impacts to be observed; and because no equivalent regulations exist in the rest of Europe outside the UK and Ireland, there either is or is not a difference in the number of fire deaths and injuries. Yet a number of reports commissioned to evaluate the lives saved came to radically different answers, from no lives saved to thousands of lives saved. While regression analysis to distinguish between causal factors is difficult (reduction in smoking, smoke alarms etc.), such a divergence is extreme, and is probably connected to who paid for each study, and preconceptions about whether the UK is a special case (for fire safety!) or similar to other European countries. Even in the meeting, participants diverged - half the room thought the UK regulations had saved lives, half did not.

This is important because if evidence cannot be drawn from the UK furniture experience, it is difficult to know how Europeans could ever come to agreement on an evidence base for fire safety.

Some participants also noted it will be important to watch the fire statistics in California and the US more generally after the change to the TB 117¹ standard. The group hopes authorities are deliberately watching whether there will be an increase in furniture / mattress fires after the change.

Fire brigades focus on these issues in some countries, not others. A final challenge on fire safety is, even if fire-fighters in European countries were noticing the same problems, this does not necessarily mean they are equipped to advocate their concerns to governments. The room agreed the UK fire-fighters have been very effective at lobbying about their concerns; in other countries this is more difficult because fire brigades may be organised differently, including volunteers,

¹ California Technical Bulletin 117 (TB 117) is a California fire safety law, first implemented in 1975. It has recently been updated as a Technical Bulletin 117-2013.

brigades being part of the military etc. There probably needs to be more discussion with fire-fighters on these issues.

ISSUE TWO: ENVIRONMENTAL & HUMAN HEALTH PROFILE OF FLAME RETARDANTS

Studies have been completed on the availability of alternatives to FRs, but there is not a collection of such information easily available. A number of participants have themselves been involved in studies to determine what are the alternatives to halogenated FRs. A typical answer is that alternatives exist, that approximately two-thirds of alternatives looked at have improved environmental / human health profiles as compared to halogenated FRs, while one-third do not.

The group discussed that it is not easy to find information on alternative FRs in one place, even on these studies, and that stakeholders would likely welcome Pinfa playing more of a role as a central point / portal of information.

GreenScreen is probably the best assessment system for FRs. A number of participants highlighted that REACH should be providing the answers to demonstrate there are FRs with good profiles, but REACH is moving too slowly to give such answers at the moment. The view is GreenScreen is the most useful tool currently if people are looking to substitute, or to understand the availability of FRs. It was discussed many would welcome Pinfa laying out how different FRs score on GreenScreen; this would give stakeholders sufficient political reassurance if some FRs are scoring well on GreenScreen.

Exposure should not be ignored. The group focused on GreenScreen to provide confidence, because there is exposure to FRs. If halogenated FRs are for example appearing in house dust and elsewhere, it is reasonable to assume that alternative FRs will also appear as substitution occurs. Hazard scoring is important, but it is also important to look at how exposure can be decreased.

The next challenge will be the Circular Economy. Circular Economy policy-making will require closer scrutiny of which additives are in materials in order decisions can be taken about composition and treatment at end of life of e.g. plastics. Pinfa and this group will need to think further about this issue.

It was noted that technology is emerging that can scan articles to find which additives are present, at very low levels. There was interest in the room that this will be increasingly important for RoHS and similar regulations.

IDEAS TO MOVE FORWARD

Future meetings. The group agreed this was a valuable process to continue, with approximately two meetings a year. This would allow Pinfa and others to follow up on ideas in between meetings, so that the issues and ideas can be progressed and the group does not repeat discussions.

The group appreciated the mix of fire safety and environmental expertise, and participants were interested to continue their participation in future meetings. The group agreed to invite several more participants, perhaps one or two from the environmental NGO community and one or two more fire-fighters (or investigators?).

Pinfa to act as a portal for existing information? Pinfa will reflect before the next meeting what it can do to act as a portal (perhaps through its website), to be an information source to link to studies on availability of FRs, GreenScreen scores, and other environmental / human health information; and on the fire safety side collecting together videos and material on FR contribution to fire safety; and bring together reports and discussions on fire safety statistics etc. There was a

view that Pinfa has done well not be an aggressive advocate on FRs, but perhaps to lay out in a more balanced way the arguments and information is a starting point before more focused outreach to convince stakeholders to change their mind.

Increase the dialogue with fire-fighters. There is more information immediately available for pinfa to put in one place on environment / human health, whereas the fire safety side has more gaps where the help of others is needed. Pinfa could with the help of fire-fighters in the group, reach out further to the fire-fighter community, to understand whether others share the concerns about increasing fire load and fatalities; how to address the fire statistics problem without waiting 20 years for action; review the evidence from the UK on furniture, not to contribute to the UK debate, but to learn lessons for fire safety analysis moving forward.

'Car park' of other issues. There were other ideas mentioned in the meeting, which were not developed sufficiently to be written up in this document in full. These include ideas around: writing essential requirements to focus on speed of fire development, and fire safety labelling for consumer products. These ideas are captured for future meetings.

This document. This document, once agreed by the participants, can be used by any of the group in discussions with others, to show the areas of discussion and to encourage collaboration on the topics involved.

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