

pinfa Advisory Board

Tenth Meeting

Thursday 10th June 2021
09:30 – 12:00 CET

VIRTUAL

The contents of this report are a capture of the inputs provided by individual participants. The views expressed are the speakers' own, and do not reflect the consensus of the Advisory Board as a whole.

This report

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1. Participants

External representatives

Sicco Brandsma, *Senior Researcher, Institute of Environmental Studies, Vrije Universiteit Amsterdam*

Diane Daems, *Senior Fire Expert, Global Material & Industry Sustainability, Huntsman Corporation*

Perrine Ethuin, *Executive Chair, Modern Building Alliance*

Anja Hofmann, *Fire Behaviour Engineer, BAM Federal Institute for Materials Research & Testing and Vice President, Association for the Promotion of German Fire Protection (vfdb)*

Frank Kuebart, *Managing Director, eco-INITIUT*

Pim Leonards, *Professor, Vrije Universiteit Amsterdam*

Lisa Melymuk, *Assistant Professor, Research Centre for Toxic Compounds in the Environment, University of Toronto*

Franklyn Okwara, *Fire Safety Expert, Modern Building Alliance*

Rudolf Pfaendner, *Division Director, FRAUNHOFER Institute for Structural Durability and System Reliability LBF*

Franck Poutch, *Director, CREPIM*

Margaret McNamee, *Professor, Lund University*

Laurent Tribut, *Technical Expert, Schneider Electric*

pinfa representatives

Esther Agyeman-Budu, *General Secretary*

Adrian Beard, *Chairman, and Clariant Corporation*

Vincent Mans, *Technical Advisor*

Adriana Jalba, *Director of EU Advocacy, ICL Industrial Products*

Ulrich Wietschorke, *ADEKA Corporation*

External moderators

Simon Levitt, *Moderator, Harwood Levitt Consulting*

Veronica Corsi, *Assistant moderator, Harwood Levitt Consulting*

2. Purpose of the pinfa Advisory Board meetings

A Sector Group within Cefic, the European Chemical Industry Council, pinfa is the Phosphorus, Inorganic and Nitrogen Flame Retardants Association. Pinfa represents the manufacturers and users of non-halogenated phosphorus, inorganic and nitrogen flame retardants (PIN FRs). As such, the Association spearheads its members' shared vision of continuously working to improve the environmental, health, and safety profiles of FR products.

To this end, pinfa constantly seeks to dialogue with industry and non-industry stakeholders in the flame retardant and the fire safety spheres, as well as the environmental sphere. The meetings of the Advisory Board provide a venue for the Association to engage with leading experts in these fields, share its ideas and activities, and tap into their inputs to inform its priorities and projects.

The meetings of the Advisory Board take place twice a year. The meetings do not have fixed participation, and attendees are encouraged to extend the invitation to relevant stakeholders.

The 10th meeting of the Advisory Board was held on 10th June 2021. Being a virtual event, the meeting was scheduled to last for two hours, and not a full day, to keep levels of engagement high, and maximise the effectiveness of interaction.

This report does not capture the contents of the previous meetings. The latter are recorded in a separate document, available [here](#).

The Chatham House Rule

The meetings of the Advisory Board follow the Chatham House Rule, whereby attendance and the contents of the discussions are reported, but the affiliation of each individual speaker is not revealed.

Competition and Compliance

The meetings of the Advisory Board are held in strict compliance with EU and international antitrust laws, as well as Cefic dos and don'ts.

3. The 10th pinfa Advisory Board meeting

The 10th meeting of the pinfa Advisory Board brought together a wealth of stakeholders across flame retardant (FR) manufacturers, downstream users, and experts from testing and research institutes, as well as representatives from academia.

In the first section of the meeting, the focus was on the European Commission-sponsored project “New European fire test for facades”. Dr Anja Hofmann, Fire Behaviour Engineer at BAM Federal Institute for Materials Research & Testing, shared an update on the status of the research. This was followed by a group discussion.

In the second section, the focus was on pinfa’s activities around the EU Chemicals Strategy for Sustainability. Pinfa presented a menu of potential action items around the Strategy. This was followed by a group discussion around the challenges and opportunities which policy changes in this area present.

a. New European Fire Test for Facades

Background

In recent years, serious cladding fires around the world have exposed the vulnerabilities of buildings to fire, and propelled a reassessment of the fire performance of facades. Sponsored by the European Commission, and run by a consortium of world-leading research and testing institutes, the project “New European fire test for facades” aims to provide a common approach to gauge the fire performance of facades across European countries. The outcomes of the project will be a test method and a proposal on classification.

The first stage of this four-phase project entailed working out a test method to assess the fire safety of facades. The second stage, currently underway, aims to refine this test method in order for it to be deployed within the framework of the implementation of Regulation (EU) 305/2011.

More information on the “New European fire test for facades” is available [here](#).

Discussion

Recognising the importance of the fire safety testing for the FR industry, as well as society as a whole, the participants of the Advisory Board meeting zoomed in on three interrelated aspects of the issue, that is, the importance of developing an inclusive standard for testing, the need for regulation to provide the conditions for applying testing, and the crucial role of implementation of standards (or lack thereof).

The choice of any particular approach to testing entails a trade-off. On the one hand, the evaluation of a specific fire safety system allows to fully appreciate the influence of the smallest variations within the situation taken into account. However, such an assessment may not be applicable wholesale beyond the individual system taken into account. On the other hand, allowing some range enables to develop a test that can be deployed across systems. However, such an assessment may not possess the same level of detail. In sum, the researcher is faced with a compromise between specificity and workability.

Another challenge lies in the inherent tension that any kind of fire safety test is vulnerable to. Whilst tests aim to replicate real-life situations, the sheer amount of variability within the latter makes this

impossible, as it would require performing a multitude of tests to assess the exact impacts of each variation. This is complicated further by the issue of the application of fire safety tests, that is, whether tests maps onto actual installations. This is not something that any test can solve in and of itself, nor is it the function of the test to solve this.

Based on the above considerations, there was an acknowledgement among participants that it is important that a standard for testing is developed in an inclusive manner, so as to help streamline the standardisation process. Complementary to that, it is important that the appropriate regulation is put in place, so as to enable those involved in the building process to discern which details are critical and cannot be changed, and, conversely, which details can be changed.

The issues of standardisation and regulation warrant consideration of the importance of implementation, that is, inspecting buildings to verify that they conform to the standards and the rules in place. Whilst the latter are essential to ensure that the new products that enter the market are certified, more efforts need to be made to enforce them, and cases of fraud are identified.

Part and parcel of efforts to increase safety against fire is a requirement that fire safety engineers be involved in the construction process from the beginning. Given the multifaceted competencies that are needed to tackle fire safety issues, there is great need for expert guidance in this field. This necessitates establishing a clear, common definition of what a fire safety engineer is, and setting out the education criteria for the profession across European countries. In sum, it is necessary that fire safety engineering be treated as a separate category from mechanical, civil or electrical engineering.

b. EU Chemicals Strategy for Sustainability

Background

As outlined in previous meetings of the pinfa Advisory Board, the EU Chemicals Strategy for Sustainability is an initiative by the European Commission that was published in October 2020 following a stakeholder consultation. The Strategy addresses a number of issues around the safety and sustainability of chemicals in Europe, with the goal of ensuring that the chemicals that are deployed in Europe are safe and sustainable, and that harmful chemicals are prevented from entering the market. In sum, the Strategy aspires to strengthen good chemistry in Europe.

The Strategy is set to produce a number of policy changes. Some of these changes are likely to bring about challenges for the FR industry, as some FRs might have hazardous properties. Simultaneously, there will be an opportunity for the industry to benefit from the instruments that will be put in place to support the transition towards safer and more sustainable industrial production of FRs.

More information on the EU Chemicals Strategy for Sustainability is available [here](#).

Discussion

Pinfa has been active in planning around the Strategy, considering potential contributions to a safer and more sustainable FR industry in collaboration with CEFIC. The envisaged activities span across four areas, i.e., 1) non-toxic / safer chemicals, 2) zero pollution, 3) climate neutrality, and 4) circularity.

The activities proposed pivot around three key questions, i.e., 1) what the FR industry should prepare for, 2) what activities the FR industry can put in place to facilitate a transition towards safe and sustainable FRs, and 3) how the FR industry can benefit from the support that the European Commission is offering.

Within the context of the Advisory Board meeting, the focus was on ten potential action items:

1. **Strengthen a commitment on REACH dossier quality**, by encouraging all pinfa members sign up to the related Cefic initiative to ensure that the dossiers registered under REACH are of good quality;
2. **Disincentivise the use of substances of very high concern**, by not actively promoting them (independently of whether they are listed or not), and offering alternatives to customers;
3. **Educate about the intended uses of FRs**, by clarifying which FRs are necessary and which uses they are most appropriate for;
4. **Define the boundaries of “essential use” of FRs**, by clarifying which FRs may have a hazardous profile but should be selectively allowed where other measures may not be viable;
5. **Contribute to the debate around persistence vs. durability**, by clarifying that in most cases flame retardants are required to not only be durable over the lifespan of a finished product, but they often need to withstand harsh processing condition. For these reasons they have a high chemical stability which unfortunately leads to persistent behaviour in the environment. A solution this dilemma can be the recycling of flame retarded materials.

6. **Contribute to demonstrating the safety profile of products**, by moving away from animal testing, whilst ensuring that there remain good ways to carry out testing;
7. **Enhance data sharing**, by working out how the data can be shared with researchers and consumers, while protecting companies that invest in studies from the competition;
8. **Generate more data on FRs**, by leveraging automated systems that enable to estimate the carbon footprint of products based on the aggregate of the chemicals they constitute them;
9. **Contribute to the Sustainable Products Initiative, e.g.** through ingredient disclosure, by harnessing blockchain technology to selectively disseminate information on ingredients and how to recycle those;
10. **Contribute to the Safe and Sustainable by Design Initiative**, by considering not only the hazard profile of products at the design stage, but taking into account the lifecycle of products;
11. **Increase efforts to recycle FR materials**, not only by demonstrating that FR materials can be recycled, but also by identifying how they can be recycled, and supporting the infrastructure to recycle them.

Taking into account the points above, the discussion revolved around three interrelated items, that is, lifecycle assessment, ingredient disclosure, and recycling infrastructure.

There was an acknowledgement that the FR industry tends to address hazards independently from climate change and waste related issues. However, the latter set of issues warrants consideration of the product lifecycle in its entirety, and necessitates taking into account the ways in which raw materials are sourced, and how products are disposed of. This presents a number of challenges.

To enhance sustainability, there is a need to ensure that the systems for assessment are parameterised properly to integrate chemical hazards as well as other kinds of hazards. A major barrier to this is the difficulty of building out a scoring system to capture this range of criteria. Within this context, one compromise solution might be to develop a benchmarking system that would allow a certain degree of flexibility.

Ingredient disclosure is important not only for customers, but also for recyclers, who need to know which kinds of additives or substances are contained in a particular product or material. However, a passport-like approach is not void of challenges. Because each product would require that each individual component is certified, huge data sets would need to be generated and constantly updated to account the sustainability of the product. Within this context, one way forward would be to harness blockchain technology to make some insights available in the public domain.

Making recycled materials fit for the new use is a more complex issue than introducing a virgin material. There are a number of technical ways to do this, and there is a need to decide with an eye to what is economically advantageous, as well as ecologic. Participants of the Advisory Board meeting expressed confidence that by enhancing collaboration with research and academia, the FR industry will identify good ways to produce FRs safely and sustainably.

4. Ideas to Move Forward

The participants of the Advisory Board meeting were again positive about the initiative. The fact that there were participants from the scientific community was especially welcomed, as the range of backgrounds in the room enabled to share expertise and learnings across fire safety and environmental topics.

There was a recognition that the structure adopted within the meetings of the Advisory Board, which provides a venue for these worlds to come together and dialogue, is an effective way of sharing knowledge and will yield positive outcomes.

The next meeting will take place in October 2021.

Once agreed by the participants, this document can be used by any member of the group for discussions with others, to show the areas of exchange and to encourage collaboration on the topics involved.