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Breast Cancer UK
Preventing breast cancer

# BREAST CANCER UK'S RESPONSE TO THE CONSULTATION ON UPDATING THE UK FURNITURE AND FURNISHINGS (FIRE SAFETY) REGULATIONS

SEPTEMBER 2016

## SUMMARY OF OUR RESPONSE


**Flame retardants have been shown to be carcinogenic and endocrine disrupting and efforts should be made to reduce their use in furniture and soft furnishings to help protect human health and the environment.**

**Since the initial consultation was launched in 2014, little progress has been made in implementing an improved test regime which would not only have addressed fundamental flaws in fire safety testing but could also would have helped to reduce exposures to unnecessarily high levels of flame retardants.**

**The current proposals add a layer of greater complexity to the original proposals whilst placing considerably less emphasis on the original policy objective of reducing the use of flame retardants. In addition, they provide little impetus for change in the design of furniture to reduce both flammability and toxicity.**

**Under the current proposals the permanent label to indicate whether the product contains flame retardants does not adequately provide consumers with information at the point of purchase and therefore does not enable them to make informed choices.**


## INTRODUCTION

Breast Cancer UK welcomes the opportunity to respond to the Department for Business Energy and Industrial Strategy's (BEIS) consultation on revised proposals relating to the UK Furniture and Furnishings (Fire Safety) Regulations (FFRs).

Breast Cancer UK focus on the primary prevention of breast cancer. There is increasing scientific concern that exposure to endocrine disrupting chemicals, which potentially includes certain flame retardants, is contributing to an increased vulnerability to the disease. As we discuss below, some legacy flame retardants have been shown to be carcinogenic and endocrine disruptors and some current flame retardants have also been linked to cancer.

Updating the UK Furniture and Furnishings (Fire Safety) Regulations provides an important opportunity to reduce human exposure to flame retardant chemicals and further the protection of public health.

## AN OPPORTUNITY TO IMPLEMENT A MORE RELIABLE AND SAFER TEST REGIME

We note that the latest revised proposals follow on from the Department for Business Innovation and Skills (BIS) 2014 consultation on the same issue, and are disappointed that the original proposals which would have addressed fundamental flaws in fire safety testing and led to a possible reduction in the use of Flame Retardants were not implemented earlier as planned. We have raised concerns about the lack of progress over the last two years on several occasions.

The reasons for the ongoing delay are unclear. However, the consultation on the new proposals provide another important opportunity to implement a test regime that is fit for purpose and one that also encourages innovative approaches to reducing the use of flame retardants in furniture and furnishings.

## OPPORTUNITY FOR DESIGNING OUT FLAMMABILITY AND TOXICITY

However, we are concerned that the current consultation document appears to place considerably less emphasis on the original policy objective of significantly reducing the use of flame retardants – instead merely acknowledging that 'regulatory change has the potential to reduce the use of flame retardants in the production of furniture and bring associated benefits to industry and consumers' (p. 4).

We are also concerned that these revised proposals add a greater level of complexity, but may effectively maintain the status quo, albeit within a revised testing regime and do not create a strong enough impetus to change furniture design and construction to design out *both* flammability and toxicity.

## OPPORTUNITY TO REDUCE THE ADVERSE EFFECTS OF FLAME RETARDANTS ON THE ENVIRONMENT AND HUMAN HEALTH.

Revising the current regulations presents a clear and present opportunity to reduce the use of flame retardant chemicals, which is an urgent priority due to the harm they cause to human health and the environment.

Brominated flame retardants (BFRs) are environmentally persistent, bioaccumulative and toxic to wild-life and humans.[1] They have been detected in human blood, urine, breast milk, air, house dust, food, and in wildlife.[2, 3] Human exposure is mainly from dietary intake and house dust. Concentrations of BFRs are generally higher in children; this is likely due to intake from breastfeeding and dust.[4]

[1] Lyche, J. L. et al. (2015). *Human health risk associated with brominated flame-retardants (BFRs).* Environment International 74: 170–180. https://www.ncbi.nlm.nih.gov/pubmed/25454234
[2] Fromme, H. et al (2016). *Brominated flame retardants – Exposure and risk assessment for the general population.* International Journal of Hygiene and Environmental Health 219: 1-23. https://www.ncbi.nlm.nih.gov/pubmed/26412400
[3] Law, R. J. et al. (2014). Levels and trends of PBDEs and HBCDs in the global environment: Status at the end of 2012. Environment International 65: 147–158. https://www.ncbi.nlm.nih.gov/pubmed/24486972
[4] Kim, Y. R. et al. (2014). *Health consequences of exposure to brominated flame retardants: A systematic review. Chemosphere* 106: 1-19. https://www.ncbi.nlm.nih.gov/pubmed/24529398

Many BFRs are endocrine disruptors. They mainly affect thyroid hormones. Some also disrupt androgens, progestins and oestrogens. Some data, based on animal and *in vitro* studies, suggest that certain novel BFRs or their metabolites may increase breast cancer risk.[5, 6] Research has shown that several brominated, chlorinated, and organophosphate flame retardants cause cancer and induce endocrine disruption in rodents.[7, 8, 9, 10]

Several flame retardants have been phased out of use in the UK due to the health risks that they pose. However, people are still exposed to these legacy flame retardants through old furniture and furnishings, and through long term persistence in the environment. For example, the first flame retardants used, polychlorinated biphenyls (PCBs), are known to be toxic, carcinogenic, bioaccumulative and act as endocrine disruptors[11]. They are associated with an increased breast cancer risk and increased mortality after breast cancer diagnosis [12, 13]. PCBs were banned for most uses in the UK in 1981, and completely in 2000. Despite this, high levels remain in the environment, and they are found routinely in humans, wild-life, soil, food and water.[14] This shows how legacy flame retardants pose a public health risk long after they are banned or their usage is restricted, and demonstrates the need for a precautionary approach.

## OPPORTUNITY TO REDUCE FUME TOXICITY

Research has also suggested that the presence of flame retardants increases the toxicity of fumes released in house fires, thereby reducing the capacity to escape a fire due to being overpowered by harmful fumes and gases.[15] This is acknowledged in the BEIS' Impact Assessment which states that 'in the USA, a majority of residential fire deaths result from inhalation of toxic gases, and soot and smoke can obscure escape.'

While not mentioned in the Impact Assessment, UK fire statistics for 2013/14 show that this is also the case in the UK: 41% of fire-related deaths in Great Britain were caused by the victim being

[5] Gosavi, R. A. et al. (2013). *Mimicking of Estradiol Binding by Flame Retardants and Their Metabolites: A Crystallographic Analysis*. Environmental Health Perspectives 121: 1194–1199. https://www.ncbi.nlm.nih.gov/pubmed/23959441
[6] Faust, J. B. and August, L. M. (2011) *Evidence on the Carcinogenicity of Tris(1,3-Dichloro-2-Propyl) Phosphate.* Sacramento, CA: Reproductive and Cancer Hazard Assessment Branch, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. http://oehha.ca.gov/media/downloads/proposition-65/chemicals/tdcpp070811.pdf
[7] National Toxicology Program (2014) *Technical report on the Toxicology studies of Tetrabromobisphenol A* CAS NO. 79-94-7.
[8] National Toxicology Program (2014). *Report on Carcinogens, Thirteenth Edition*. Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service: 2,2-Bis(bromomethyl)-1,3-propanediol, CAS No. 3296-90-0.
[9] Faust, J. B. and August, L. M. (2011). op cit
[10] Chen, G. et al. (2015). *Exposure of male mice to two kinds of organophosphate flame retardants (OPFRs) induced oxidative stress and endocrine disruption*. Environmental Toxicology and Pharmacology 40(1): 310–318. https://www.ncbi.nlm.nih.gov/pubmed/26183808
[11] IARC (2016). IARC monograph 107. Polychlorinated and polybrominated biphenyls. http://monographs.iarc.fr/ENG/Monographs/vol107/mono107.pdf
[12] Parada, H. et al. (2016). *Polychlorinated biphenyls and their association with survival following breast cancer*. European Journal of Cancer 56: 21-30. https://www.ncbi.nlm.nih.gov/pubmed/26798968
[13] Leng, L. et al. (2016). *Polychlorinated biphenyls and breast cancer: A congener-specific meta-analysis*. Environment International 88: 133-141. https://www.ncbi.nlm.nih.gov/pubmed/26735351
[14] IARC (2016). *op cit*
[15] *Halogenated Flame Retardants: Do the Fire Safety Benefits Justify the Risks?,* Reviews on Environmental Health Volume 25, No 4, 2010, Susan D. Shaw, Arlene Blum, Roland Weber, Kurunthachalam Kannan, David Rich, Donald Lucas, Catherine P. Koshland, Dina Dobraca, Sarah Hanson and Linda S. Birnbaum; *Assessment of the fire toxicity of building insulation Material,* Energy and Buildings, 43 (2-3), 2011, pp. 498-506, Anna A Stec and T Richard Hull

overcome by gas, smoke or toxic fumes – by far the largest cause of deaths in house fires. In addition, 20% of deaths are caused by a combination of burns and being overcome by gas or fumes[16].

Taking steps which will promote safety by design rather than safety by the addition of harmful chemicals could help to see a reduction in these alarming statistics.

## OPPORTUNITY TO IMPROVE CONSUMER RIGHT TO KNOW AND LABELLING

We welcome the proposal that would require products to be clearly labelled and give a clear indication of whether flame retardants have been used, in compliance with Regulations, and agree with the statement made in the Impact Assessment that, 'Better labelling will enable consumers to make informed choices'.

However, to make an informed choice, consumers need to be able to see this information at the point of purchase, for example, via a *visible* display label such as that required to show the energy efficiency rating of energy-using products.

The proposals for a permanent label as set out in the proposals do not provide an effective way for consumers to easily obtain this information at the point of purchase and therefore cannot be said to bring the consumer benefit claimed in the Impact Assessment.

The label should also state which chemical substances have been used as flame retardants. The inclusion of this information has two benefits:

- it allows consumers to avoid products containing substances which may be under investigation by public authorities due to public and environmental health concerns at the time of purchase; and
- if a fire retardant substance is banned, this information will enable the appropriate handling of products at the end of their useful life.

## BREAST CANCER UK POSITION

Many flame retardants have been found to be carcinogenic or to have endocrine disrupting effects

We would support changes to the test regime that remove the need for the use of flame retardants and create genuine impetus for designing out both flammability and toxicity because of these potentially adverse effects to human health and the environment.

We support the introduction of a requirement for a *visible display* label to provide consumers with point-of-purchase information on the presence and type of flame retardants contained in the product, like the EU energy label.

[16] UK Fire Statistics 2013/14 op cit

We also endorse the position and proposed solutions outlined in the submission to this present consultation made by the Sustainability Network for Standardisation, such as the introduction of a cigarette (smoulder) test modelled on the Californian standard, Technical Bulletin 117-2013 which has the potential to reduce the number of fire deaths resulting from the inhalation of toxic gases and fumes but also prevents the unnecessary exposure of the entire UK population to proven and potentially harmful chemicals.

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