2016 - 043 FIDRA

Department for
Business, Energy
& Industrial Strategy

Consultation on updating the Furniture and Furnishings (Fire) (Safety) Regulations (FFRs) response form

The consultation is available at: www.gov.uk/government/consultations/furniture-and-furnishing-fire-safety-regulations-proposed-changes-2016

The closing date for responses is **11 November 2016**.

The form can be submitted by email to: furniture.consultation2016@bis.gsi.gov.uk or submitted by letter to:

Christine Knox
Regulatory Delivery
Department for Business, Energy and Industrial Strategy
Second Floor
1 Victoria Street
London
SW1H 0ET

Please be aware that we intend to publish all responses to this consultation.

Information provided in response to this consultation, including personal information, may be subject to publication or release to other parties or to disclosure in accordance with the access to information regimes. Please see the section on confidentiality and data protection on page 7 of the consultation for further information.

If you want information, including personal data, that you provide to be treated in confidence, please explain to us what information you would like to be treated as confidential and why you regard the information as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the department.

I want my response to be treated as confidential ☐

Comments:

Fidra are grateful for the opportunity to respond to this consultation as an NGO working on environmental issues.

Who are we? Fidra is a charity based in East Lothian, Scotland. We seek to find ways to engage local concerns over current and emerging environmental issues, and use this to contribute to wider dialogue at national and international levels. Once

concerns have been identified, we use scientific evidence and research best practice to establish how best to influence positive environmental change. Find out more at www.fidra.org.uk

Summary The BEIS consultation acknowledges the need to update the current FFR regulations, which have not changed significantly since their adoption in 1988. Improvements could not only improve fire safety, but also significantly reduce the use of flame retardant chemicals, which are used as the main route to compliance by furniture manufacturers. In the 30 years since the FFRs were first introduced, our understanding, both of risks associated with fire, and of the hazards of flame retardant chemicals, have increased significantly, and these advances must be considered when updating the testing regime[1].

An overwhelming database of scientific evidence indicates hazard to human and environmental health associated with exposure to flame retardant chemicals (see below). FRs may also contribute to fire toxicity in the form of increased levels of carbon monoxide, dioxinsand PAHs in smoke[2], which is one of the main causes of fatalities from fires and an occupational hazard for fire fighters.

At the same time, UK fire statistics indicate that smokers' materials (cigarettes, cigars or tobacco) caused the largest number of fire-related fatalities (80 fatalities in 2013/14)[3]. In contrast, deaths due to ignition by open flame were at 22, with 11 of these fatalities associated with matches and lighters, therefore potentially still associated with smoking. Clearly, smokers are at a high risk of injury and death in domestic fires. The proportion of adults smoking has now sunk to its lowest value since records began (16.9% of adults in 2016), and attitudes to smoking in enclosed spaces have also changed dramatically in the last decades. As stated in a recent article in Fire Protection Engineering[4] "fire safety benefits accrue only to individuals who sustain a fire (an ever-shrinking, small part of the population), while adverse health effects challenge the totality of the population". More focused efforts aimed at at-risk population groups could have the same or improved impact on fire fatalities, without impacting the health of the whole population.

Although we welcome the revised consultation, the overall changes suggested by this document do not go far enough to ensure substantial change. The regulations should include a greater incentive to design out both flammability *and* toxicity from furniture. The impact assessment does not fully analyse the potential for human health risk from FR exposure, and is therefore incomplete.

Our recommendations are as follows:

1) Remove the requirement for a match test for cover material, simplifying test to a cigarette (smoulder) test. This maintains high levels of fire safety by addressing the largest cause of death in furniture fires, ignition by smokers' materials, and should be combined with targeted awareness raising for behavioural change among high-risk groups. Removing the match test will significantly reduce dependence on flame retardant chemicals for compliance.

2) Introduce *visible display labels* providing consumers with information regarding the presence and type of flame retardants used in furniture, similar

to the EU energy label.
This gives consumers the opportunity to make an informed choice about the products they buy and their chemical constituents. It also ensures that standards are ready for potential future design innovations, e.g. in production of a safer group of flame retardant chemicals.

Flame retardants and human / environmental health
Polybrominated diphenyl ethers (PBDEs) have been found in human blood, tissue, breast milk, with total levels increasing ~100fold in the last 30 years[5]. PBDEs are linked to thyroid disruption[6], memory and learning problems[7], delayed mental and physical development[8], lower IQ[9], advanced puberty[10] and reduced fertility[11].

Studies of indoor dust indicate higher BPDE levels in the UK than in other EU countries[12], with a predominance of decabromodiphenyl ether (BDE-209/ deca-BDE) that is attributed to its use in upholstery and textiles in compliance with FFR 1988. An estimated 95% of upholstered materials are treated with flame retardant chemicals in the UK[13].

BDE-209 has been shown to disrupt the thyroid hormonal system, and has carcinogenic potential for a variety of tumours[14]. It may also break down into its more toxic constituents (now banned at EU-level) in the environment[15]. BDE-209 has been classified as very persistent, very bioaccumulative (vPvB) substance and a persistent, bioaccumulative and toxic (PBT) substance by ECHA, and in 2015 recommended phase-out through REACH. As part of their recommendation to phase out most uses of Deca, the ECHA committees expressed their concern in December 2015 that the producing industry had still not updated its registration dossier to take into account this decision.[16] There are concerns that chemicals used to replace those banned from production, lack sufficient safety testing before they are introduced[17]. These emerging flame retardants (EFRs) have similar potential health concerns, are found in increasing quantitiy in household dust and air[18].

Endocrine disrupting chemicals have been estimated to cost the EU €157bn annually (1.23% of EU GDP)[19], with PBDEs accounting for up to €24bn of this estimate through links to IQ loss, cryptochordism and testicular cancer.

Safety risks
The UK is proud of its high safety standards, and it is important to ensure that any change in testing will not lead to a reduced fire safety for UK citizens. However, the impact assessment from this consultation clearly states that a decision was made not to fully analyse the third option of removing the match test. In addition, no attempt was made to assess potential health hazards associated with brominated flame retardants in comparison to the acute dangers of fire.

California recently decided to lift its stringent regulations, partly due to the lack of clear evidence that more stringent fire safety regulations were actually improving fire safety[20].

Questions

Name: [redacted]
Organisation (if applicable): Fidra
Address: 25 Westgate, North Berwick, EH39 4AG

	Respondent type
☐	Business representative organisation/trade body
☐	Central government
☒	Charity or social enterprise
☐	Individual
☐	Test House
☐	Manufacturer
☐	Retailer
☐	Large business (over 250 staff)
☐	Legal representative
☐	Local government
☐	Medium business (50 to 250 staff)
☐	Micro business (up to 9 staff)
☐	Small business (10 to 49 staff)
☐	Trade union or staff association
☐	Other (please describe)

Questions on scope

Q1 Do you agree with the revised definition of the Regulation's scope?

☒ Yes ☐ No ☐ Not sure

Comments:

Q2 Do you agree with the proposals relating to sleeping bags and mattress protectors (i.e. those which can be put in a washing machine are explicitly removed from scope and do not have to meet the requirements of the regulations)?

☒ Yes ☐ No ☐ Not sure

Comments: The consultation explains that the reason for this is the removal of FRs during washing which will change the flammability of the final product during its lifetime. The inclusion of the products not only increases the burden on the environment, but also gives consumers an unrealistic expectation of the flame retardancy of their product.

Q3 Do you agree with the proposals relating to cushions and seat pads (i.e. that they remain excluded from cover tests but the definition of these products to be specified more clearly)?

☐ Yes ☐ No ☒ Not sure

Comments:

Q4 Do you agree with the proposals relating to outdoor furniture (i.e. that outdoor furniture unsuitable for use inside the home, and clearly labelled as not complying with the Regulations) should be out of scope?

☒ Yes ☐ No ☐ Not sure

Comments:

Q5 Do you agree with the proposals relating to baby products (i.e. that items covered by covered by BS EN1888 (wheeled child conveyances) and BS EN1466 (carry cots and stands) are removed from scope, with padded playpens treated in the same way as mattresses)?

☒ Yes ☐ No ☐ Not sure

Comments: Children are particularly vulnerable to chemical exposure, and these products represent articles which young children come into contact with on a daily basis. The arguments provided in the consultation indicate clearly that the exemption will not lead to increased risk in fire safety, therefore the risk from FR chemicals are unnecessary.

Q6 Do you agree with the proposed treatment of second-hand products (i.e. that they would be required to bear the relevant permanent label)?

☐ Yes ☐ No ☒ Not sure

Comments:

Questions on testing

Q7 Do you agree to removing the Filling 1 option?

☐ Yes ☐ No ☒ Not sure

Comments:

Q8 Do you agree that the specifications set out in the draft Regulations for the test foam and fibre wrap are sufficient to achieve the objectives of the Regulations?

☐ Yes ☐ No ☒ Not sure

Comments: We welcome the use of a more realistic internal foam. This not only improves overall safety, but also reduces the need for FR chemicals on the cover fabric. However, specifying the use of combustion modified foam locks manufacturers into the use of FRs in the foam. This does not incorporate room for innovation regarding alternative fillings, or design changes to reduce flammability by other means. We would like to see changes to testing that would give furniture designers / engineers the incentive to phase out both flammability and toxicity in the future.

Q9a Do you agree that the regulations should provide a protective cover option?

☐ Yes ☐ No ☒ Not sure

Comments:

Q9b If yes, do you agree with our proposed definition of protectiveness?

☐ Yes ☐ No ☒ Not sure

Comments: The complexity of paths to compliance may cause confusion.

Q10 Do you agree with the proposed requirements for components close to the cover?

☒ Yes ☐ No ☐ Not sure

Comments: Yes, components close to the cover should be tested. This is more realistic and will lead to safer furnishing. However, we believe the test required should be smoulder test only.

Q11 Do you agree that there is no need for the cigarette test for covers that pass the revised match test?

☐ Yes ☒ No ☐ Not sure

Comments: We believe there is no need for match test, as the large majority of fires are started by cigarettes rather than matches. Cigarettes remain the largest source of furniture & furnishing fire, therefore removing the smoulder test seems counter-intuitive.

For business respondents:

Q12 Which of the routes to compliance do you expect to follow for most of your products?

☐ Schedule 3 interliner ☐ Protective cover

☐ Non-protective cover + compliant components ☐ Not sure

Comments: n/a

Q13a What do you expect the impact of the testing proposals to be on your use of flame retardants in covers?

☐ Increase ☐ Decrease ☐ No change ☐ Not sure

Comments: n/a

Q13b What do you expect the impact of the testing proposals to be on your overall use of flame retardants?

☐ Increase ☐ Decrease ☐ No change ☐ Not sure

Comments: n/a

Questions on traceability and enforcement

Q14 Do you agree with the product record/technical file requirements for manufacturers and importers?

☒ Yes ☐ No ☐ Not sure

Comments: Increased transparency allows for greater consumer choice and is always preferable. However, the type of flame retardants used should be detailed in order to allow full transparency.

Q15a Do you agree with the requirements for the single permanent label, and the proposal to remove the requirement for additional display labels?

☐ Yes ☒ No ☐ Not sure

Comments: We welcome the additional requirement that flame-retardant use will have to be included on permanent labels. However, the proposed change falls short of requirements in two respects: 1) a visible display label is vital to allow customers to make an informed choice when purchasing furniture. This technique has been used very successfully for other product lines, for example for efficiency ratings of electrical products[21]. Permanent labels are usually hidden from view and will not be read by most consumers. 2) More information regarding chemical composition of flame retardant chemicals should be included. This gives more choice to the consumer, allowing them to avoid certain chemicals. Should a certain substance be banned in the future, this information may simplify end-of-life handling.

Q15b What do you think is the most effective means of conveying the use of flame retardants in the cover of this product eg by text, symbol?

Comments: Generalised symbol with accompanying text detailing chemical composition OR a simplified grading system similar to that used by the EU energy label scheme.

Other questions on the proposals

Q16 Do you agree that a 24 month transition period is sufficient, and that the changes should be reviewed in five years?

☐ Yes ☐ No ☒ Not sure

Comments: n/a

Q17 Do you have any other comments on the proposals or draft regulations?

☒ Yes ☐ No ☐ Not sure

Comments: **Is there a need for a 'more severe' match test?** The impact assessment directly states that 'we do not have comparative data which allows us to assess whether UK regulations actually lead to safer furniture than the rest of the EU' where only a smoulder test is required.

A full assessment is required to ensure that the match test itself is contributing *enough* to safety improvements, to justify the increased chemical load to the environment. There may be alternative methods to ensure a similar level of fire safety that have not been fully examined.

This is the first significant change to the FFRs in 30 years, and represent an opportunity to incorporate 30 years of research into the hazards of fire retardant chemicals, but also the extensive improvements that have been made to fire safety in the home through other measures. However, the changes proposed appear to essentially maintain the status quo. The proposals are unlikely to reduce the quantity of flame retardants used on products significantly (as stated in the impact assessment), will not simplify trade between UK and other EU countries, and, in fact, increase the complexity of compliance for manufacturers. The proposed adjustments do not incorporate flexibility for future design innovation to reduce both fire hazard and chemical exposure.

Questions on the Impact Assessment

Q18 Do you agree with our estimate of traceability time in the Impact Assessment – ie one-off input of 16 hours per firm and ongoing per year time of 48 hours per firm? If not can you provide additional evidence to support your answer?

☐ Yes ☐ No ☐ Not sure

Comments:

Q19 How much do you estimate you would save per year from the removal of the cigarette test?

Amount saved: Click here to enter text.

☐ Nothing ☐ Not sure

Q20 How much do you estimate you would save per year from reduced use of flame retardants?

Amount saved: Click here to enter text.

☐ Nothing ☐ Not sure

Q21 Are you aware of any further costs or benefits we have not identified in the impact assessment? Please support with any evidence you have.

☒ Yes ☐ No ☐ Not sure

Comments: Endocrine disrupting chemicals have been estimated to cost the EU €157bn annually (1.23% of EU GDP), with PBDEs accounting for up to €24bn of this estimate through links to IQ loss, cryptochordism and testicular cancer[22]. The full costs of flame retardant chemicals, both qualitative and quantitative, to the UK, need to be fully explored. The impact assessment to these changes is incomplete in that regard and does not represent a full evaluation of costs and benefits.

Q22 To what extent do you agree that, overall, these proposals represent a reasonable compromise – bearing in mind the information in this consultation document, feedback on the previous (2014) consultation, and other stakeholder input during the review?

☐ Strongly Agree ☐ Agree ☐ Not sure ☐ Disagree ☐ Strongly Disagree

Thank you for taking the time to let us have your views. We do not intend to acknowledge receipt of individual responses unless you tick the box below.

Please acknowledge this reply ☒

At BEIS we carry out our research on many different topics and consultations. As your views are valuable to us, would it be okay if we were to contact you again from time to time either for research or to send through consultation documents?

☒Yes ☐No

BEIS/16/11/RF

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[1] Consultation on updating UK Furniture and Furnishings (Fire) (Safety) Regulations, Sept. 2016 – Response by the Sustainability Network for Standardisation.

[2] Babrauskas V. and Stapleton, H.M. Halogenated Flame Retardant Use in Residential Settings – Are they safe for our health? *Fire Protection Engineering* 4th Q 2015 *and references within.*

[3] Departments for Communities and Local Government. Fire Statistics: Great Britain April 2013 to March 2014

[4] see ref 2

[5] Hites, R.A. (2004) Polybrominated Diphenyl Ethers in the Environment and in People: A Meta-Analysis of Concentrations *Environmental Science and Technology* 38(4), pp.945-956

[6] Chevrier, J. et al. (2010) Polybrominated Diphenyl Ether (PBDE) Flame Retardants and Thyroid Hormone during Pregnancy *Environmental Health Perspectives*, 2010

[7] He, P. et al. (2011) Toxic effect of PBDE-47 on thyroid development, learning, and memory, and the interaction between PBDE-47 and PCB153 that enhances toxicity in rats, *Toxicology and Industrial Health* 27(3):279-88

[8] Eskenazi, B. et al. (2013) In utero and childhood polybrominated diphenyl ether (PBDE) exposures and neurodevelopment in the CHAMACOS study, Environ Health Perspectives. 121(2):257-62

[9] see ref 8

[10] Chen A. et al. (2011) 'Serum PBDEs and Age at Menarche in Adolescent Girls: Analysis of the National Health and Nutrition Examination Survey 2003–2004', Environment Research. 111(6): 831–837

[11] see ref 1

[12] Tao et al. (2016) Emerging and Legacy Flame Retardants in UK Indoor Air and Dust: Evidence for Replacement of PBDEs by Emerging Flame Retardants? *Environmental Science and Technology* (in press)

[13] EU Risk Assessment Report. European Union Risk Assessment Report on BIS(PENTABROMOPHENYL) ETHER. Eur. Comm. Jt. Res. Centre, Eur. Chem. Bur. EUR20402EN, 2002. 2002, Vol. 17

[14] Li et al. (2014) Toxic effects of decabromodiphenyl ether (BDE-209) on human embryonic kidney cells. *Frontiers in Genetics* 5 118

[15] Betts, K. (2008) *Does a key PBDE break down in the environment?* EST News 6781

[16] *RAC and SEAC Opinion on an Annex XV dossier proposing restriction on Bis(pentabromophenyl) ether (DecaBDE)*, 2015 http://echa.europa.eu/documents/10162/b5ac0c91-e110-4afb-a68d-08a923b53275

[17] 'There is convincing evidence (including more extensive toxicity data) that the emerging BFR *tris(2,3-dibromopropyl) phosphate* (TDBPP) and the novel BFR *2,2-Bis(bromomethyl)-1,3-propanediol* (DBNPG) are genotoxic and carcinogenic, warranting further surveillance of their occurrence in the environment and in food. Based on the limited experimental data on environmental behaviour, *1,2-bis(2,4,6-tribromophenoxy)ethane* (BTBPE) and *hexabromobenzene* (HBB) were identified as compounds that could raise a concern as reports indicate that they can accumulate in the body over time.', EFSA, http://www.efsa.europa.eu/en/topics/topic/bfr

[18] see ref 12

[19] Trasande, L. et al. (2015) Estimating burden and disease costs of exposure to endocrine-disrupting chemicals in the European Union J Clin Endocrinol Metab. 2015 Apr;100(4):1245-55.

[20] See ref 2

[21] Sammer and Wuestenhagen (2006). The Influence of Eco-labelling on consumer behaviour – Results of a Discrete Choice Analysis for Washing Machines. *Business, Strategy and Environment* 185-199 DOI: 10.1002/bse.522

[22] Trasande, L. et al. (2015) Estimating burden and disease costs of exposure to endocrine-disrupting chemicals in the European Union J Clin Endocrinol Metab. 2015 Apr;100(4):1245-55.