



Department for  
Business, Energy  
& Industrial Strategy

**CONSULTATION ON UPDATING  
THE FURNITURE AND  
FURNISHINGS (FIRE) (SAFETY)  
REGULATIONS**

SEPTEMBER 2016

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# Review of the Furniture and Furnishings (Fire)(Safety) Regulations (FFRs)

The Furniture and Furnishings (Fire) (Safety) Regulations set fire safety requirements for upholstered furniture sold in the UK. A review of the Regulations has been ongoing for some time and a consultation was held in 2014 on proposals relating to the FFRs testing regime. In light of the feedback from that consultation, the Government published a formal response in March 2015 which explained that we would undertake further work on some of the technical aspects of the proposals, and consider these as part of the wider review which also covered scope and traceability. This consultation therefore builds on that work and sets out some revised proposals which include changes to testing requirements, the scope of the regulations and the traceability of products.

To implement the changes, we propose to make the Furniture and Furnishings (Fire Safety) Regulations 2016, revoking and replacing the existing 1988 Regulations. A draft of the 2016 Regulations is at Annex 7. In the consultation we are asking for comments on the contents of both the proposals and the draft regulations. In addition, we are seeking input on the impacts of these Regulations to ensure our Impact Assessment correctly reflects the likely costs and benefits.

**Issued:** 14 September 2016

**Respond by:** 11 November 2016

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This consultation is relevant to manufacturers, importers and retailers of upholstered furniture as well as test houses, enforcement authorities, and others (see a full list at paragraph 7 below).

## 1. Executive summary

1. This consultation seeks your views on proposed changes to the Furniture and Furnishings (Fire) (Safety) Regulations 1988. The Regulations cover the whole of the UK and set fire safety requirements for a range of upholstered furniture items intended for use in the home, including (but not limited to) sofas, armchairs, beds, divans, sofa-beds, children's furniture, pushchairs, prams, cots, mattresses, pillows and cushions.
2. We are proposing these changes because stakeholders have asked us to revise the regulations as they no longer reflect changing consumer expectations and modern furniture manufacturing practices. We particularly want to make changes to the testing methods in the regulations so that they better reflect the way current furniture is made and also to allow manufacturers to reduce flame retardant use.
3. Whilst the current FFRs do not stipulate the use of flame retardants, their use is widespread as the primary means of meeting the requirements of the Regulations. There are some concerns over the health and environmental impacts of certain FRs: evidence suggests that flame retardant chemicals, particularly brominated flame retardants, when broken down into individual constituents, can be harmful to human and animal health, and the environment. Regulatory change therefore has the potential to reduce the use of flame retardants in the production of furniture and bring associated benefits to industry and to consumers.
4. The FFRs are national legislation and unlike most other product safety legislation, they are specific to the UK, and not based on EU harmonised standards." In respect of the UK's withdrawal from the EU, the Government will be engaging with businesses and key stakeholders up and down the country. We will listen to their concerns, aim to limit uncertainty in the transition and ensure our new relationship with the EU works for business.
5. The proposals in this consultation stem from an extensive review process involving a wide range of stakeholders, and also build on a previous consultation on certain aspects of the Regulations in 2014.
6. The proposals include:
  - **Scope** – A revised definition of furniture and specific list of exclusions; various clarifications on what is in scope of the Regulations; the removal of certain childcare products from scope;
  - **Testing** – A revised match test for covers (building on previous proposals); anew match test for components to be used in certain circumstances; removal of the cigarette test for most covers;
  - **Traceability and enforcement** – A new requirement for manufacturers to hold a technical file; a revised approach to the permanent label including the introduction of information on the use of flame retardants; the removal of the requirement for temporary display labels; more time for Trading Standards to bring a prosecution.

7. We expect this consultation to be of particular interest to:
  - Manufacturers, importers, distributors and retailers of products covered by the Regulations;
  - The re-upholstery industry;
  - The chemical industry (including chemical producers and the fabric treatment industry);
  - Test Houses
  - The insurance industry;
  - Fire and Rescue services;
  - Trading Standards;
  - Consumer groups.
8. The consultation will last for 8 weeks and the responses will be used to inform the decision on what, if any, changes will be made to the Regulations. We also intend to publish all responses in due course.

## 2. How to respond

### Online, email, letter

9. When responding please state whether you are responding as an individual or representing the views of an organisation. If you are responding on behalf of an organisation, please make it clear who the organisation represents by selecting the appropriate interest group and, where applicable, how the views of members were assembled.
10. You can reply to this consultation online at:  
<https://beisgovuk.citizenspace.com/er/proposal-to-revise-1988-furniture-and-furnishings>
11. Alternatively, you can reply to this consultation using the response form on the consultation page: [www.gov.uk/government/consultations/furniture-and-furnishing-fire-safety-regulations-proposed-changes-2016](http://www.gov.uk/government/consultations/furniture-and-furnishing-fire-safety-regulations-proposed-changes-2016) (until the consultation closes).

The form can be submitted by email to: [furniture.consultation2016@bis.gsi.gov.uk](mailto:furniture.consultation2016@bis.gsi.gov.uk)

OR

by letter to:

Christine Knox  
Regulatory Delivery  
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1 Victoria Street  
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12. A list of those organisations and individuals consulted is in [Annex 2](#). We would welcome suggestions of others who may wish to be involved in this consultation process.

### Closing date

13. The consultation will open on: 14 September 2016
14. The closing date for responses is midnight on: 11 November 2016

### Printed Copies

You may make printed copies of this document without seeking permission. BEIS consultations are digital by default but if required, printed copies of the consultation document can be obtained from Christine Knox (see above).

Other versions of the document in Braille, other languages or audio-cassette are available on request.

### 3. Confidentiality and data protection

15. 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 (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations 2004). There is also a statutory Code of Practice issued under section 45 of the FOIA with which public authorities must comply and which deals, amongst other things, with obligations of confidence.
16. 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.

### 4. Help with queries

17. Questions about the policy issues raised in the document can be addressed to:

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18. The consultation principles are at [Annex 1](#).

## 5. The proposals

### Introduction

#### The existing Regulations

19. The Furniture and Furnishings (Fire) (Safety) Regulations 1988 (FFRs) have now been in existence for nearly 30 years. At the time they were introduced, domestic upholstered furniture presented a very significant threat to safety in the home. The natural, fire-resistant materials used in furniture making for centuries, such as wool, cotton and horsehair, had been replaced during the second half of the twentieth century with cheaper foam fillings, making new furniture affordable for all. Unfortunately, these new man-made materials were extremely flammable and the result was a sharp increase in fatalities resulting from house fires. The Regulations strengthened existing requirements for cover fabrics to be resistant to ignition and introduced a new flammability requirement for foam fillings. As a result, the number of house fires and fatalities due to combustible furniture began to fall rapidly.
20. Research commissioned by BIS, and carried out by Greenstreet Berman<sup>1</sup>, shows that fires involving furniture and furnishings increased by about 8% between 1981 and 1987. The introduction of the FFRs in 1988 saw this increase level off, and by 2007 the number of fires had fallen by about 38% from the 1987 level. Whilst the statistics since 2009 are not directly comparable due to a change in the way information was recorded by the fire services, these have also shown a fall (of around 45% between 2009/10 and 2013/14).
21. The report suggested that, even when community fire safety initiatives (such as the Home Fire Risk Check system introduced in 2004) are taken into the consideration, the FFRs have played an important role in the prevention of house fires and concomitant injury and death. However the review undertaken with stakeholders over the past few years has indicated that the Regulations are no longer entirely appropriate to changing consumer expectations, and furniture manufacturing practices. Areas of concern include the scope of the Regulations, their enforceability, and the effectiveness of the testing regime. In addition, it was felt that the testing regime, most particularly the match test prescribed in the FFRs, could be updated so that it reflects more closely the way modern furniture is constructed.

#### Flame retardants

22. Evidence suggests that flame retardant chemicals, particularly brominated flame retardants, when broken down into individual constituents, can be harmful to human and animal health, and the environment. (Research references at Annex 5). For this reason, REACH<sup>2</sup> the EU's chemical legislation, is proposing to restrict the use of decaBDE, a Brominated Flame Retardant (BFR) widely used in furniture production. If adopted the restriction would come into force in 2018. A substitute has been found for decaBDE but the possibility of it also being restricted at some point in the future cannot be ruled out. The necessity of changing chemicals to comply with REACH

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<sup>1</sup> Greenstreet Berman (2009): A statistical report to investigate the effectiveness of the Furniture and Furnishings (Fire) (Safety) Regulations 1988

<sup>2</sup> Registration, Evaluation, Authorisation and restriction of Chemicals

puts a financial burden on the furniture industry which could be avoided if chemical use were reduced. The requirements of the Stockholm Convention are also significant. The Convention, ratified by 179 countries including the UK, obliges these countries to reduce and eliminate the production, use and release into the environment of persistent organic pollutants (POPs) in order to protect human health and the environment.

23. Whilst the current FFRs do not stipulate the use of flame retardants, their use is widespread as the primary means of meeting the requirements of the Regulations. Regulatory change therefore has the potential to reduce the use of flame retardants, and reduce the burden on industry.
24. All of this also needs to be considered in a wider global context. Safety standards for UK furniture are acknowledged as being the highest in Europe. Unlike most other product safety legislation, they are specific to the UK, and not based on EU harmonised standards. Some European Member States object strongly to the use of flame retardant chemicals in furniture because of the growing evidence of their deleterious effect on health and the environment, and EU consumers are deterred from purchasing UK products.
25. Concerns about the safety of flame retardant chemicals are not confined to Europe. Lobbying by environmental bodies, combined with consumer concern, has resulted in a change in the furniture flammability standard in California to exclude the use of flame retardants<sup>3</sup>, and Washington banning five flame retardants used in furniture and children's products. Reducing UK manufacturers' use of flame retardants should therefore also make it easier for them to export to Europe and beyond.

### **This consultation**

26. In this context, and building on the review mentioned previously, BIS consulted in 2014 on a number of proposed changes to the FFRs testing regime (specifically the match and cigarette tests). However, the match test is only part of the story: clear feedback was received from stakeholders participating in the 2014 consultation that it would be preferable to see all possible changes set out together and in its formal response to the consultation in March 2015, the Government set out its intention to bring all the changes together as part of the wider review. This message was also reflected in subsequent discussions in two stakeholder workshops held in the summer of 2015, where these potential wider changes were discussed in more detail.
27. Building on stakeholder feedback, therefore, this consultation brings together proposals on three main elements of the Regulations:
  - Scope
  - Testing
  - Traceability and enforcement

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<sup>3</sup> California Bureau of Home Furnishings Technical Bulletin (TB) 117 - 2013

28. BEIS is asking stakeholders to consider the overall effect of the proposed changes and to respond with opinions on their possible individual and collective impacts. We believe this will result in a more balanced assessment of the potential effects of the revised regulations than was possible with the previous consultation and also reflect ideas put forward at the 2015 workshops.
29. This consultation includes an Impact Assessment along with the draft regulations and accompanying commentary. We welcome your comments on both the overarching policy questions set out below and the detail of the draft Regulations.

## Scope

### Definition

30. The scope of the 1988 Regulations is presently defined by:
  - A list of what is included
  - A list of exclusions
31. However, tastes and fashions in furniture have changed over the past 30 years. There is now a lack of clarity as to what now falls within the scope of the Regulations. Following discussions at the stakeholder workshops organised by BIS in July and August 2015, it was generally agreed that a more holistic, 'everything is included unless it's specifically excluded' approach, which would require a much reduced supplementary list of exclusions, would be simpler and more easily understood by those in the production chain, retailers and enforcement agencies.
32. Based on discussions at the workshops, we therefore propose the following wording which we believe to be comprehensive and to fulfil the criteria outlined above:
 

*These regulations cover any item of domestic furniture which is ordinarily intended for private use in a dwelling and comprises a cover fabric and a filling.*
33. Our intention is that unless a product which meets this definition is specifically excluded, it will be within scope of the revised Regulations.

**Proposal: A single definition to cover all items in scope, supplemented by a list of exclusions.**

### Clarifications and exclusions

34. The 1988 Regulations have a number of 'grey areas' including scatter cushions, seat pads, sleeping bags and washable mattress protectors. We want to set out a definitive exclusions list to clarify the Regulations whilst generally seeking to maintain the current status quo. The definitive removal from the Regulations' scope of ambiguous products should reduce the number of products which need to be tested, with a consequent reduction in the amount of flame retardant chemicals in the home. These products would of course continue to be covered by the General Product Safety Regulations (GPSR) and any relevant British or European Standards.

35. Products for possible exclusion were discussed at the 2015 workshops. In particular, some stakeholders argued strongly for the exclusion of certain baby products predominantly used outside the home and this is discussed further below. We also set out our proposals for the application of the Regulations to second-hand furniture, together with consideration of other 'grey areas' including outdoor furniture.

*Sleeping bags and mattress protectors*

36. Our proposal is that sleeping bags and washable mattress protectors which can be put in a washing machine should be excluded because, in the course of the product's lifetime, any flame retardant chemicals are soon washed off, rendering flame retardant treatment pointless. This is the same rationale currently used for duvets.

**Proposal: Sleeping bags and mattress protectors which can be put in a washing machine to be excluded.**

*Cushions and seat pads*

37. A scatter cushion is usually defined as a small cushion which can be moved to any position in a room and is supplied separately; that is, it does not comprise an integral part of an item of furniture. In the same way, a seat pad is generally accepted as being a small cushion intended to be used with, for example, a wooden kitchen or dining chair.
38. The 1988 Regulations require that only the filling materials for such items must satisfy the relevant ignition test and this will continue to be the case in the revised Regulations. The 1988 Regulations do not offer a definition of either item, but it is commonly accepted that a scatter cushion has dimensions of less than 60cm x 60cm x normal product thickness. A seat pad is accepted as having dimensions no bigger than 30cm x 30cm x 1cm thick. Our proposal is that the revised Regulations will formalise these definitions.

**Proposal: Scatter cushions and seat pads to remain excluded from cover tests but the definition of these products to be specified more clearly.**

*Outdoor furniture*

39. Currently, the Regulations apply to outdoor furniture which is suitable for use in dwellings, but do not apply to garden furniture if it is (a) not suitable for use in dwellings (e.g., if it could not physically be brought indoors), (b) is non-upholstered (e.g., deck chairs), or (c) consists only of cover fabric (e.g., sunshades or canopies).
40. However, in practice the treatment of outdoor furniture varies geographically and between manufacturers, leading to inconsistency and confusion. In an effort to resolve this, and following discussions at the 2015 stakeholder workshops, BEIS is proposing that outdoor furniture be excluded from the Regulations if (a) it is not suitable for use inside the home; and (b) it is clearly labelled to demonstrate that it is for outdoor use only as it does not comply with the Regulations. The Regulations themselves would remain high level, but we would expect the finer details of this proposal to be agreed between industry and Trading Standards to ensure consistency.

**Proposal: Outdoor furniture unsuitable for use inside the home, and clearly labelled as not complying with the Regulations, to be out of scope.**

*Baby and child products*

41. Currently, the Regulations apply to a range of baby products, including pushchairs, prams and carry cots. However, there is a good argument that inclusion of these products does not actually contribute to the wider objectives of the Regulations – namely reduction in the risk of serious injuries or loss of life due to house fires – for two reasons.
42. Firstly, many of the products in question do not pose the same risks as upholstered furniture because of the way they are used. For example, prams and pushchairs are predominantly used (and intended to be used) outside the home, and are only brought inside on an exceptional basis. Moreover, even when inside the home, they would not be exposed to the same risks of accidental ignition (for example from smoking materials).
43. Secondly, even if ignited, the products contain a much lower fuel load than other upholstered items, and therefore any fire would be less likely to spread.
44. As well as the risk of house fires being low from these items, the risk of fire-related injury to the child themselves would also be low since many of the products in question are not intended to be used with the child left unattended. Moreover, these products are already covered by the UK's General Product Safety Regulations and robust standards for childcare products, which include a requirement for fire resistance.
45. We are therefore proposing to remove from the scope of the Regulations those childcare items covered by standards BS EN1888 (wheeled child conveyances – pushchairs, prams, etc.) and BS EN1466 (carry cots and stands). Childcare articles which have more in common with mattresses (for example padded playpens) would be subject to the same requirements as mattresses (i.e. filling test only), while other children's furniture such as highchairs would continue to be within scope of the Regulations as a whole, subject to any other relevant exclusions.
46. As shown in the Impact Assessment, this could bring significant savings by reducing testing costs and administrative burdens for manufacturers of these items, without undermining the objective of the legislation. Moreover, this could help to address particular concerns raised about the use of flame retardants in children's products.

**Proposal: Childcare articles covered by BS EN1888 (wheeled child conveyances) and BS EN1466 (carry cots and stands) to be removed from scope. Padded playpens to be treated in the same way as mattresses.**

*Second-hand furniture*

47. Second-hand furniture produced after 1950 is currently within scope of the 1988 Regulations and subject to the same requirements as new furniture. However, in practical terms, this is enforced by ensuring that furniture offered for sale as second-

hand, or second-hand furniture donated to charity, bears the original permanent label.

48. We propose that the revised Regulations reaffirm this existing practice by making it a requirement for second-hand furniture to bear the relevant permanent label which would have been applicable at the time when the product was first supplied (i.e. the 'current' label for furniture originally supplied prior to the new Regulations coming into force, or the 'new' label for furniture originally supplied after that date). In addition, second hand products would continue to be subject to the requirements of the General Product Safety Regulations. Pre-1950 furniture would continue to be exempt from the Regulations.

**Proposal: Second-hand furniture offered for sale, or donated to charity, should bear the original permanent label.**

### Summary of scope changes

49. The following table shows the summary of proposed changes to scope. Treatment of all other items will remain as stated in the 1988 Regulations.

Item	1988 Regulations	This consultation
<b>Sleeping bags and mattress protectors</b>	Unclear, but generally accepted to be excluded	Excluded if suitable for washing in a washing machine
<b>Cushions and seat pads</b>	In scope (filling only), but not clearly defined	In scope (filling only), definition clarified based on product dimensions
<b>Outdoor furniture</b>	Excluded if not suitable for use in a dwelling	Excluded if not suitable for use in a dwelling and clearly marked as non-compliant with the Regulations
<b>Pushchairs, prams and carry cots</b>	In scope (cover and filling)	Excluded
<b>Padded playpens</b>	In scope, but definition unclear	In scope, filling only
<b>Other children's furniture</b>	In scope	In scope

## Scope: Consultation questions

Unless otherwise indicated the response options to all questions are: yes / no / not sure

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

**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)?**

**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)?**

**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?**

**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)?**

**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)?**

## Testing

### The FFRs flammability tests

50. In the 2014 consultation on the FFRs, BIS proposed a set of changes to the match test and cigarette test intended to make the tests better reflect how modern furniture is constructed, whilst incentivising a reduction in the use of flame retardant chemicals. The proposal aimed at delivering cost savings to industry without compromising the effectiveness of the tests.
51. The feedback to the consultation – published at [www.gov.uk/government/consultations/furniture-fire-safety-regulations-proposed-amendments](http://www.gov.uk/government/consultations/furniture-fire-safety-regulations-proposed-amendments) showed that while there was no objection in principle to BIS' aims for reform, there were concerns about the safety implications of the proposals, and on whether the changes would have the desired effect, or be workable and enforceable. The previous Government therefore sought further work as set out in the Government response to the consultation initially through a set of questions which the British Standards Institute agreed to consider. The Government response can be found at: [www.gov.uk/government/consultations/furniture-fire-safety-regulations-proposed-amendments](http://www.gov.uk/government/consultations/furniture-fire-safety-regulations-proposed-amendments).
52. The feedback from the BSI process (see feedback from the FW/6 committee members at Annex 6) provided a number of clarifications and helped us develop our ideas. We have also made use of technical advice through a panel chosen to represent a spectrum of views to further inform and check our process of policy

development. The make-up of the panel and meeting notes are included in the consultation documentation [www.gov.uk/government/consultations/furniture-and-furnishing-fire-safety-regulations-proposed-changes-2016](http://www.gov.uk/government/consultations/furniture-and-furnishing-fire-safety-regulations-proposed-changes-2016). The result is a compromise set of reform proposals that we believe can gain wider acceptance.

## Objectives

53. Our amended proposals are intended to:

- ensure no reduction of safety;
- allow industry to reduce its use of flame retardants in response to concerns about the impact of these chemicals on health and the environment;
- leave room for innovation and the development of new technology – particularly new barrier technology that would allow fire resistance to be achieved without the use of chemicals – and also innovation as to the materials used in furniture;
- give industry choices for adapting to change; and
- be capable of enforcement by Trading Standards.

54. We also want to ensure we fully understand much better the potential impacts of the proposed changes across the entire upholstery manufacturing and supply chain. While we expect the proposals to deliver savings, we also recognise that there may be costs. We do believe, however, that the element of choice which we have introduced into the system should stimulate different approaches, and we would expect competition and innovation will then help drive change, and lower costs over the medium term.

## Explanation of the revised testing proposals

55. The amended proposals build on the core concept and insights of the earlier proposals. In particular we think the match test should reflect more closely how most modern furniture is constructed. This is important given that the match test remains a proxy, rather than applying to the actual composite of the furniture, which in theory would be the most “realistic” form of the test.

56. The summary proposals are set out below and the following sections discuss each of the changes in turn. The changes only apply to the test for covers (and components close to the cover) – this proposal does not include any changes to the test or requirements for fillings (Schedules 1 and 2 in the 1988 Regulations) or interliners (Schedule 3 of the 1988 Regulations).

	1988 Regulations	2014 proposal	This consultation
<b>Test foam</b>	Non-combustion modified	Combustion modified	Combustion modified
<b>Test structure</b>	Cover directly over foam	Filling 1: cover directly over foam; Filling 2: cover over foam and fibre wrap	Cover over foam and fibre wrap (i.e. Filling 2)
<b>Protective covers</b>	Not defined	Measured for all covers using hole formation	Optional test based on hole formation – applied to cover, or combination of cover + lining material
<b>Components close to the cover</b>	Not tested	Modified match test with externally-managed exemptions list	Modified match test, no exemptions list
<b>Cigarette test</b>	Required for all covers	Removed for covers that pass match test	Removed for covers that pass match test

### Test foam and test structure

57. At present, the match test requires covers to be tested directly over a non-combustion modified foam. In order to make the test more representative of real furniture, the 2014 proposal recommended a change in the test foam from non-combustion modified (non-CM) foam to combustion modified (CM) foam.
58. Whilst keeping the test method the same as in the current Regulations (BS 5852:Part1:1979), it also proposed two options for test structure, one where the cover would be placed directly over the foam (Filling 1), and one where the cover would be tested over foam together with a fibre wrap (Filling 2). The latter was the test structure considered more representative of most modern furniture (see the technical paper included with the Government Response at [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/416984/bis-15-150-technical-annex-systematic-rationale-for-modification-of-the-furniture-furnishings-fire-safety-regulations-in-relation-to-schedule-4-schedule-5.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/416984/bis-15-150-technical-annex-systematic-rationale-for-modification-of-the-furniture-furnishings-fire-safety-regulations-in-relation-to-schedule-4-schedule-5.pdf)).
59. Filling 1 was included to provide a simpler specification where covers are placed directly over the foam filling in the final product.

60. The chemical specification of the foam was one area which attracted feedback. However, adverse comments focused mainly on the use of non-combustion modified foam in the Filling 1 scenario. The fact that major retail suppliers offer pre-tested covers to other manufacturers as part of their business also suggests that this option would not in reality be available in many circumstances because these suppliers would not necessarily know how their product would ultimately be used. More generally, there could be practical problems in ensuring that covers tested over Filling 1 were only used directly over foam in the final product.

61. The amended proposal therefore drops Filling 1 and specifies Filling 2 as the proposed test requirement for all cases. We have also considered two subsidiary questions in relation to Filling 2:

62. *Should there be a chemical specification for the combustion-modified foam?*

Feedback received via the BSI process suggested that expert agreement on a particular foam would not be possible; and that if the Filling 1 route was not adopted, the chemical specification of the foam would be less of an issue. This was also confirmed in our technical panel discussions. We do not therefore believe a chemical specification for the foam is needed.

63. *Should there be further specification of the fibre-wrap?*

We are proposing to specify the fibre wrap according to the material and its width (see draft Regulations for further detail). However, discussions in the technical panel highlighted that it might also be helpful to define a range for the density of the fibre, to avoid extremes which could unduly influence the outcome of the test. We will therefore work with fibre manufacturers during the consultation period to identify a range for fibre density which reflects the fibre commonly used in furniture construction.

**Proposal: Match test for all covers to be conducted over a single test structure – CM foam and fibre wrap, as specified in the draft Regulations**

#### **Protective covers and ‘hole formation’**

64. The current regulations work on the premise that the cover for furniture should be ignition resistant and also serve to protect the upholstery contents (the filling). As well as seeking a more representative format for the test structure, the 2014 proposal therefore explicitly separated out these two functions and required all covers to be tested for hole formation as an indication of whether they would meet the protective criterion as well as the ignitability requirement. Where covers failed to meet the protective requirement, BIS therefore originally proposed that they would be classed as “not protective” and industry would be required to ensure the fire safety of components close to the cover through a new match test for components.

65. Feedback on this proposal raised a number of issues including:

- whether defining protection by “hole formation” was workable (particular with respect to measurement and repeatability);

- whether the additional testing for hole formation was proportionate – given that most types of cover were likely to be non-protective; and
  - how this would affect business supply chains.
66. Some comments from the BSI process suggested that the requirement should be dropped entirely. However, doing this would mean assuming that all covers that passed the ignition test were not protective – which could cause difficulties in certain sectors and unnecessarily restricts industry’s options.
67. We have therefore worked with our technical panel to develop a protective cover option so that those who wish to use a protective cover route to compliance can do so, thereby avoiding the need to test components close to the cover. We have considered a range of options, including the use of a chemical ‘marker’ on the test foam to indicate flame penetration, or using non-CM foam and seeing whether it ignites. However, whilst these options have certain advantages, they also have their own drawbacks. We have therefore chosen to propose a methodology based on the previous ‘hole formation’ idea.
68. Building on the 2014 proposal, we propose that a cover is defined as ‘protective’ if, when tested under our revised match test (either on its own or in combination with any liner or non-flame retardant treated fire barrier that will appear in the final product), it does not form a visible hole of more than 2mm.
69. Whilst we acknowledge this could be burdensome for the manufacturer, we would only expect this approach to be used in a minority of cases. Moreover, if a cover is shown to be protective, the manufacturer would not need to incur the cost of testing their components close to the cover.

**Proposal: A cover is defined as ‘protective’ if, when tested under our revised match test (either on its own or in combination with any liner or non-flame retardant treated fire barrier that will appear in the final product), it does not form a visible hole more than 2mm.**

### **Components close to the cover**

70. As noted above, we understand that some manufacturers will not want to go down the route of ensuring their components are match-resistant, hence the development of the ‘protective cover’ option. Alternatively, under our proposals manufacturers can continue to deploy a Schedule 3 interliner, which would also exempt them from the need to test components (see below). However, if neither of these approaches are used, there will be a requirement to ensure that components close to the cover – defined as those within (inside) 40mm of the visible cover – are tested for fire safety, using a new ‘match test for components’.
71. The match test for components was a part of the 2014 proposal, alongside a suggestion that there should be a list of exempt materials. The previous proposal also introduced the idea that components used close to the cover could themselves provide a protective function (the logic being that if the cover itself was not protective, then a protective material/ component close to the cover that was laid over other, flammable components in the filling would perform the necessary barrier function.)

72. Although the aim of an “exclusion” list was to make management of the components easier, it is clear that legally, an exclusion list could only be relied on if the list were part of the Regulations. Feedback in consultation however suggested that since upholstery design changes continually, the list would have to be updated annually – which is not feasible. In addition, there were doubts in some quarters as to the benefits of dealing with a list, as opposed to managing without. It was also not clear that the availability of a list would make enforcement any easier (especially once our traceability proposals are taken into account).
73. In terms of the concept of ‘protective components’, feedback suggests that (a) there are unlikely to be many, if any, materials currently used which would perform this function; and (b) the idea of protective components adds complexity for both manufacturers and enforcers.
74. In this consultation, we are therefore proposing that we drop the suggestion of an externally managed list of exemptions. This means that where a non-protective cover is used, the manufacturer will need to ensure that all components close to the cover are compliant with the match test for components. We recognise that this may mean some re-sourcing of flammable materials currently used within fillings. However, while some feedback suggests this will be difficult, other feedback suggests that, for the majority of components, there are alternative materials that could be found and that re-sourcing would not therefore be problematic, at least in the medium-long term.
75. For the avoidance of doubt, components close to the cover are defined as all materials (excluding the filling, which is subject to separate requirements, but including any lining materials not tested in combination with the cover) within (i.e. inside) 40mm of the visible cover and in the filling. The 40mm measurement reflects the likely depth of flame penetration. The match test for components is set out in Schedule 5 of the new draft Regulations.

**Proposal: if neither a protective cover, nor a Schedule 3 interliner, is used in the final product, then all components close the cover must pass the new ‘match test for components’. This includes any lining materials not already tested in combination with the cover.**

### **Innovation and flexibility**

76. In presenting these amendments to the 2014 proposal, we have tried to improve our recognition of the way business currently operates and to give industry players more choice as to how they prefer to adapt (for example in dividing the new responsibilities for testing). We also want to encourage innovation, not just in development of fire barrier technology, but also in how furniture filling is managed and arranged.
77. We recognise, however, that some sections of the market – including some re-upholsters – currently use Schedule 3 interliners to meet the requirements of the Regulations and will want to continue to do so, for the sake of least disrupting their existing business. It is also possible (though costly) that certain players will want to use a Schedule 3 interliner in combination with a non-protective match test cover to avoid the need to test components close to the cover. Our proposals therefore also allow for this approach as a route to compliance.

**Proposal: Schedule 3 interliners can continue to be used as a means to comply with the Regulations. Where a Schedule 3 interliner is used, components close to the cover would not need to pass the modified match test.**

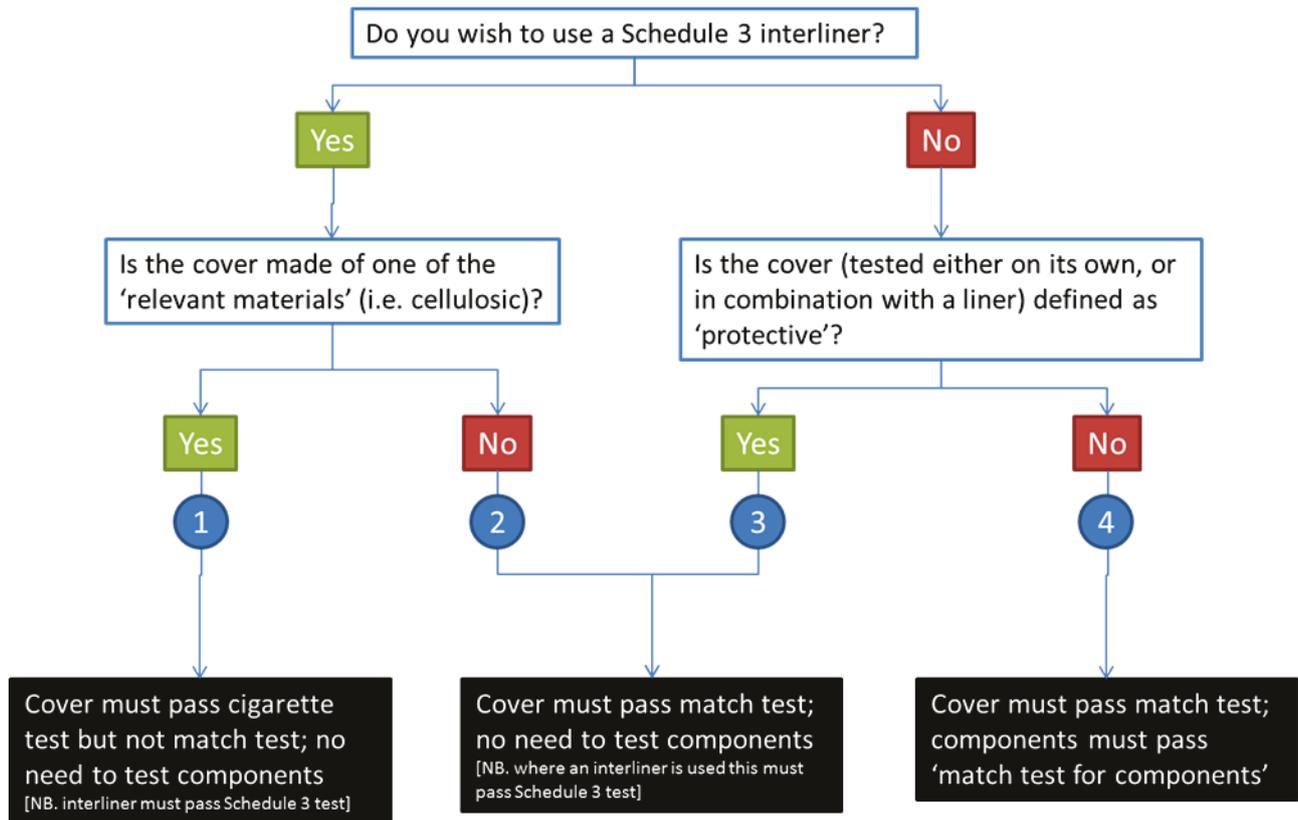
### **Cigarette test**

78. In the original proposal, BIS suggested that it would be possible to remove the cigarette test for any fabric that passed the match test, on the grounds that experience in test houses over the years had shown that in nearly all cases, fabrics that passed the match test also passed the cigarette case.
79. The responses gathered through the BSI process, and subsequent discussions with our technical panel, confirmed that in 99% of past cases, the correlation between match test and cigarette test pass clearly existed. Whilst it was noted that for some leathers and non-synthetic fabrics this relationship did not hold, we believe that the proportionate approach is still to remove the requirement to test against the cigarette test for those materials which are required to pass the match test.
80. This would, of course, mean the cigarette test still had to be passed for fabrics that are not tested under the match test (in accordance with Schedule 3 of the current Regulations). We are aware that there are technical difficulties with the current cigarette test, in that it is hard for test houses to procure the specified cigarette for testing. However, we do not propose to resolve this issue here. Finding an appropriate alternative (for example a heated coil) could be something for industry to consider with BSI.

**Summary of route to compliance**

81. To summarise, the revised proposals offer a number of different routes to compliance. The diagram below shows how we think people might therefore consider the issue.

**Figure 1**



**Testing: Consultation questions**

82. As noted, we are keen to understand the impacts of our proposals, both in terms of the business and expected use of flame retardants. The questions below are designed to try to establish some clearer steers from stakeholders on these points.

**Q7 Do you agree to removing the Filling 1 option?**

**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?**

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

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

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

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

*For business respondents:*

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

- Sch 3 Interliner i.e. not the match test (routes 1 or 2 in Figure 1)
- Protective cover (route 3)
- Non-protective cover + compliant components close to the cover (route 4)
- Not sure

**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

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

- Increase
- Decrease
- No change
- Don't know

**Traceability and enforcement**

83. The 2015 stakeholder workshops revealed both a desire on the part of Trading Standards for clearer supply chain information and a willingness on the part of manufacturers and retailers to provide such information, as far as they are able to do so. We believe that specifying the information and traceability requirements more clearly will help ensure product safety for consumers and aid Trading Standards by enabling enforcement officers to trace a non-compliant product back to its place of manufacture, via importers, distributors and wholesalers. Accurate record-keeping throughout the supply chain will mean that responsibility for safe products is shared equally between all those involved.
84. The traceability proposals set out below reflect existing good practice within the sector and are based on those for other products thereby bringing furniture into line with other product sectors, for example toys and electrical goods. As a result of discussions with stakeholders, BEIS is proposing that manufacturers (and importers where applicable) must keep product records, known as technical files, for 10 years dating from when the product is first placed on the market. Technical files must be

made available upon request to enforcement authorities. A technical file is essentially required to facilitate compliance and enforcement, and to show how the product meets the requirements of the Regulations. We therefore propose that the technical file should include, as a minimum:

- the (a) name, (b) registered trade name or registered trade mark, and (c) contact address of the manufacturer or importer who first supplied the article in the UK;
- the date on which the article was manufactured or imported (in its finished form) into the United Kingdom;
- the type, batch, serial or model number, or other element, to enable identification of the product in line with the permanent label;
- a description of all the (a) filling materials; (b) covering materials; and (c) components (identifying those within 40mm of the cover where relevant) included in the article;
- a description of the flame retardants included in the cover, where applicable;
- evidence, including the details and results of any test carried out on the furniture in question or any of its components, to demonstrate that the product is compliant with the Regulations.

85. In addition, and as for the current Regulations, manufacturers will also be required to ensure each product carries a permanent label. However, unlike the current Regulations, we propose that there should be no distinction between a 'short' and 'long' label, and that the label should focus on the minimum information needed to ensure traceability of the product, together with some limited information for the consumer. We therefore propose that the label should include:

- the words "CARELESSNESS CAUSES FIRE" and "DO NOT REMOVE THIS LABEL";
- the (a) name, (b) registered trade name or registered trade mark, and (c) contact address of the manufacturer;
- the (a) name, (b) registered trade name or registered trade mark, and (c) contact address of the importer (where applicable);
- a type, batch, serial or model number, or other element, to enable identification of the product;
- a declaration that the article complies with the requirements of the Regulations (and a statement, where applicable, that it does so via the use of a Schedule 3 interliner);
- an indication (by text, symbol or other means) of whether flame retardants have been used to ensure the cover meets the requirements of the Regulations.

86. Our proposal for the inclusion of information on flame retardants on the permanent label is in response to public concerns about these chemicals which were articulated

at the stakeholder workshops, and in subsequent meetings, by a group of concerned charities. We believe the inclusion of this information is important in helping to inform consumer choice in the purchase of furniture intended for long-term use in the home. The other information specified above is all included to aid enforcement agencies and thereby improve product safety. Retailers (distributors) must also continue to ensure that the permanent label is present before offering the item for sale.

**Proposal: Manufacturers (and importers where applicable) must keep technical files. Manufacturers must ensure each item of furniture carries a permanent label to enable traceability, and others in the supply chain must ensure the permanent label is present.**

**Proposal: The permanent label should provide relevant information to consumers on the use of flame retardants in the product, with further detail provided in the technical file.**

87. Finally, we propose removing the requirement for additional display labels, since in practice these are immediately removed by the consumer after purchase and are unlikely to affect consumer behaviour with respect to safety.

**Proposal: The existing requirement for (non-permanent) display labels is removed for all products.**

88. BEIS is confident that, overall, the traceability requirements set out above will not place a significant additional burden on business as, at the workshops, it was agreed that it already standard practice for reputable retailers to supply much of the information that will be required. The proposal will therefore transform current good practice into legislation in order to encompass those suppliers and manufacturers whose procedures are less robust.

89. More widely, we believe all the changes set out above will assist Trading Standards in enforcing the Regulations. However, to assist them in taking enforcement action where businesses do not comply, we are proposing to extend the time available to bring a prosecution under the Regulations from 6 months to 12 months, in line with other consumer safety legislation.

**Proposal: Time for Trading Standards to carry out a prosecution is extended from 6 months to 12 months.**

## Summary of changes to traceability and enforcement

90. The following table shows the summary of proposed changes to traceability and enforcement.

Issue	1988 Regulations	This consultation
<b>Information held by manufacturers</b>	Various information required to be produced on request	Manufacturer required to compile and hold a technical file
<b>Permanent label</b>	Long and short permanent labels with various requirements	Single permanent label with simplified requirements, plus information on flame retardants
<b>(Temporary) display labels</b>	Various requirements dependent on the product	No requirement for display labels
<b>Time available to Trading Standards to bring a prosecution</b>	6 months	12 months

### Traceability and enforcement: Consultation questions

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

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

- Comment Box

### Other proposals

#### Transition period

91. We recognise that change can be costly, and that businesses need time to make the necessary changes in line with supply chain pressures. In the 2014 consultation on changes to the testing regime, we proposed an 18 month transition period. However, concern was expressed at the stakeholder workshops about re-testing costs and loss of stock, particularly for SMEs.

92. In order to reduce costs for industry, and to give manufacturers a reasonable length of time in which to change production cycles (if necessary) and to allow compliant products to filter through the supply chain, we are therefore proposing a transition period of 24 months for manufacturers to move to the new test, and to sell off any stock which will not be compliant with the new Regulations. However, manufacturers may move to the new testing requirements sooner if they wish.

**Proposal: The Regulations include a transition period of 24 months**

### **Review clause**

93. In line with government policy (and the approach taken in relation to technical standards), and to reflect good practice and the need for legislation to keep pace with technological change, the draft Regulations include a five year review clause. This will ensure that the Regulations are explicitly reviewed within five years to ensure they remain fit for purpose, and are re-confirmed or updated as required. We would not envisage the first review to be a substantial exercise as we are unlikely to have a significant body of evidence on the operation of the new Regulations, but this will provide an opportunity to reflect on the practical application of the legislation.

### **Proposal: The Regulations include a 5-year review clause**

#### **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?**

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

## 6. Consultation questions

### Questions on scope

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

### Questions on testing

- Q7** Do you agree to removing the Filling 1 option?
- 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?
- Q9a** Do you agree that the regulations should provide a protective cover option?
- Q9b** If yes, do you agree with our proposed definition of protectiveness?
- Q10** Do you agree with the proposed requirements for components close to the cover?
- Q11** Do you agree that there is no need for the cigarette test for covers that pass the revised match test?

*For business respondents:*

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

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

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

### Questions on traceability and enforcement

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

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

**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?

### 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?

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

### 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?

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

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

**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.

**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?

## 7. What happens next?

94. This consultation is necessary to enable the UK to make regulations to update the Furniture and Furnishings (Fire) (Safety) Regulations 1988. Once the consultation is closed, a government response will be published in accordance with government guidelines. The government response document will be placed on GOV.UK along with copies of the responses to the consultation as for the previous consultation. Paper copies of the summary of responses made available on request.
95. Following the response, the new regulations will be made and laid in Parliament at the soonest appropriate date.

## Annex 1: Consultation principles

The principles that government departments and other public bodies should adopt for engaging stakeholders when developing policy and legislation are set out in the consultation principles.

[www.gov.uk/government/publications/consultation-principles-guidance](http://www.gov.uk/government/publications/consultation-principles-guidance)

### Comments or complaints on the conduct of this consultation

If you wish to comment on the conduct of this consultation or make a complaint about the way this consultation has been conducted, please write to:

Angela Rabess  
BEIS Consultation Co-ordinator  
1 Victoria Street  
London  
SW1H 0ET

Tel: 020 7215 1661

Email: [angela.rabess@beis.gov.uk](mailto:angela.rabess@beis.gov.uk)

However if you wish to comment on the specific policy proposals you should contact the policy lead (see section 4 '[Help with queries](#)').

## **Annex 2: List of individuals/organisations consulted**

### **Business – Retailers, Manufacturers, Chemical and Treatment companies**

- Aerozip
- Alstons Sofas
- Arthur Brett
- Ashley Manor
- Britax
- Cambridge Natural Mattress
- Chemtura
- Clarkson Textiles
- Cybex
- DFS
- Dorel Juvenile
- Dunelm Mills
- Duresta
- Ercol
- Euroflam
- Flexible Foam Research
- FRETWORK
- Furniture Village
- G Plan
- Home Retail Group
- Ikea
- John Lewis
- Kirton Healthcare
- Lebus Upholstery
- Maclaren
- Mamas and Papas
- Mothercare
- Next
- Parker Knoll
- QFC
- Relyon
- Sainsburys
- ScS
- Silentnight
- Siren Furniture
- Tesco
- Trevira
- Westbridge Furniture
- Wyvern furniture

## Trade Associations, Test houses

- AMUSF Master Upholsterers & Soft Furnishers
- BPA Baby Products Association
- BFM British Furniture Manufacturers
- BRC British Retail Confederation
- CIRFS European Man-made Fibres Assocn
- EFRA European Flame Retardants Association
- LOFA Leisure & Outdoor Furniture Association
- NBF National Bed Federation
- NCC National Caravan Council
- FIRA
- Intertek
- SATRA
- SGS
- UK Textile Laboratory Forum
- West Yorkshire Materials Services WYJS

## Charities, Academics, Technical Experts and Others

- Breast Cancer UK
- British Standards Institute FW6 Committee
- Cancer Prevention Society
- ChemTrust
- Green Science Policy Institute (US)
- Imperial College
- LGC
- National Standards Body of Ireland
- Kevin Nimmo, Consultant
- RoSPA
- Sustainability Network for Standardisation
- University of Bolton
- University of Central Lancashire
- Which?

## Fire and Rescue Services, Trading Standards

- Bedfordshire Fire & Rescue
- Cheshire Fire & Rescue
- CFOA Chief Fire Officers Association
- FBU Fire Brigades Union
- FPA Fire Protection Association
- Fire Safety Platform
- FSF Fire Sector Federation
- Manchester Fire & Rescue
- Milton Keynes Trading Standards
- Northants Trading Standards
- Rhonda Trading Standards
- Suffolk Trading Standards

## Other Government Departments/Agencies

- Cabinet Office
- Consumer Product Safety Commission (US)
- Defra / Environment Agency
- Home Office
- Food Standards Agency
- Foreign Office
- Government of Ireland
- Northern Ireland Executive
- Scottish Government
- Welsh Government

## **Annex 3: Impact Assessment**

This information is attached as a separate document.

## Annex 4: Consultation response form

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

The closing date for responses is 11 November 2016.

Please follow the instructions on [Section 2](#) on how to return a completed form.

### **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](#) for further information.

If you want information, including personal data, that you provide to be treated as confidential, please explain to us below why you regard the information you have provided as confidential. If we receive a request for disclosure of the information, we shall 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:

Name:

Organisation (if applicable):

Address:

	<b>Respondent type</b>
<input type="checkbox"/>	Business representative organisation/trade body
<input type="checkbox"/>	Central government
<input type="checkbox"/>	Charity or social enterprise
<input type="checkbox"/>	Individual
<input type="checkbox"/>	Test House
<input type="checkbox"/>	Manufacturer
<input type="checkbox"/>	Retailer
<input type="checkbox"/>	Large business (over 250 staff)
<input type="checkbox"/>	Legal representative
<input type="checkbox"/>	Local government
<input type="checkbox"/>	Medium business (50 to 250 staff)
<input type="checkbox"/>	Micro business (up to 9 staff)
<input type="checkbox"/>	Small business (10 to 49 staff)
<input type="checkbox"/>	Trade union or staff association
<input type="checkbox"/>	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:

**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:

**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:

**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:

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

Yes  No  Not sure

Comments:

**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:

***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:

**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:

**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:

### **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:

**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:

**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:

### 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:

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

Yes                       No                       Not sure

Comments:

### 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:

- Nothing       Not sure

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

Amount saved:

- 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:

**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

## Annex 5: Research references

*Scientific Opinion on Brominated Flame Retardants (BFRs) in Food: Brominated Phenols and their Derivatives*

[www.efsa.europa.eu/en/efsajournal/pub/2634.htm](http://www.efsa.europa.eu/en/efsajournal/pub/2634.htm)

*Scientific Opinion on Emerging and Novel Brominated Flame Retardants (BFRs) in Food*

[www.efsa.europa.eu/en/efsajournal/pub/2908.htm](http://www.efsa.europa.eu/en/efsajournal/pub/2908.htm)

*In Utero and Childhood Polybrominated Diphenyl Ether (PBDE) Exposures and Neurodevelopment in the CHAMACOS Study*

[www.ncbi.nlm.nih.gov/pmc/articles/PMC3569691/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3569691/)

*Prenatal Exposure to PBDEs and Neurodevelopment*

[www.ncbi.nlm.nih.gov/pmc/articles/PMC2866690/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2866690/)

*Prenatal Exposure to Organohalogenes, Including Brominated Flame Retardants, Influences Motor, Cognitive, and Behavioural Performance at School Age*

[www.ncbi.nlm.nih.gov/pmc/articles/PMC2799472/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2799472/)

Barceló, D and Eljarrat, E (eds), *The Handbook of Environmental Chemistry, Vol 16, 'Brominated Flame Retardants'*, Springer-Verlag, Berlin, 2011

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## Annex 6: Feedback from members of BSI FW6 committee

### Response to BIS questions: collated written comments from members of BSI committee FW/6 flammability performance and fire tests for furniture

#### QUESTION 1

The BIS proposal includes the use of combustion modified foam in Schedule 5 Part 1. We propose to specify the density and hardness of the foam (density of 24-26 kg per m<sup>3</sup> and a hardness of 115-150N, consistent with the specification set out in Schedule 5 Part 3 of the current Regulations). We do not propose to specify a chemical formula, as we do not consider this materially affects the outcome of the test.

Can BSI confirm whether a chemical formula for the foam specification is actually necessary – bearing in mind both the requirements of the test (repeatability) and also practicality (i.e. the need for any foam so defined to be readily available for test houses to use)?

If a chemical formula is required, what specification should be set for the legislation?

If agreement can't be reached on a chemical formula for combustion-modified foam (that allows for repeatability and easy access for test houses), are there any feasible alternatives, including non-combustion modified foam, that would still deliver the intended policy objectives?

N.B. the policy objectives are:

- Maintenance (or improvement) of fire safety (of furniture and furnishings within the scope of the FFRs)
- Reduction in use of Flame Retardants

#### COMMENTS ON QUESTION 1:

Foam industry research and test house results have shown a large variation in the FR behaviour of foams based on their formulation.

Specifying only the hardness and density of the foam is not going to be sufficient to provide a test substrate that provides repeatable and accurate representation across test houses which in turn will make compliance difficult to achieve and enforcement of the regulations difficult for trading standards officers.

There is a real concern that unless a globally available worst case foam formulation can be found, match ignitable furniture could enter the supply chain.

There would also be the possibility for manufacturers or test houses to find the most beneficial formulation to use for testing purposes to ensure a high pass rate even though a different formulation foam is actually used in the product, this could in turn compromise consumer safety and make it a difficult if not impossible task to enforce the regulation.

It is not possible to specify an absolute chemical formulation; however, If the two proposed filling options remain, then the foam only option will be important in relation to foam type.

The preliminary research suggests that foam with a fibre wrap is the closest to a worst case filling and is better representative of current upholstery than either a CMHR foam on its own or a non-CMHR foam as currently used.

It is anticipated that in this combination the specification of the CMHR (Combustion Modified High Resilience) foam is less critical as the main contribution to the test will be the fibre layer.

It is anticipated that the test using foam and a fibre wrap will be at least as safe as the current regulations, however it is believed that it will not result in savings in FR chemical treatments.

The current BIS proposal is too complicated. There are currently two base options – testing over just foam and testing over foam with a fibre wrap. It is anticipated that this will cause confusion in the market place. It is suggested that only one filling option is chosen. The preliminary research suggests that foam with a fibre wrap is the closest to a worst case filling and is better representative of current upholstery than either a CMHR foam on its own or a non-CMHR foam as currently used.

It is anticipated that in this combination the specification of the CMHR foam is less critical as the main contribution to the test will be the fibre layer. It is therefore suggested that attention is drawn to the specification of the fibre layer, rather than the CMHR foam.

As far as can be seen no work has been carried out on the effect of using fibre layers from different manufacturers to see whether this has an impact on test repeatability. Also the tension within the test rig may be important (i.e. how compressed the foam is).

It is suggested that two research programmes are initiated to assess:

- Whether using different fibre layers affects test repeatability;
- Whether using the same fibre layer gives different results in different laboratories.

It is anticipated that the test using foam and a fibre wrap will be at least as safe as the current regulations, however it is believed that it will not result in savings in FR chemical treatments.

We do not agree with the inclusion of a chemical formula for the foam to be used in any revised match test as this is neither feasible nor practical and would unfairly restrict the choice of foam to be used in this test. We are also of the consensus that there is no other suitable alternative means of specifying the foam other than the density and hardness already included in the description of the foam as given in the current Regulations. However, as was raised during the FW/6 meeting, we would question whether the foam used below the polyester wrap needs to be combustion modified or could in fact continue to be the non-flame retardant foam as used as the present for Schedule 5 Part 1.

However, to the best of our knowledge the original work did not include any work to determine if a change in foam is even necessary and the use of a non-flame retardant foam would at least continue to offer an assurance of a level of protection from the cover fabric for the fillings.

We would therefore propose that, subject to the outcome of further research to determine the effect of non-flame retardant foam under a polyester wrap versus the proposed filling 2, then the proposals delete the use of 'filling 1' and revise the test to use the foam as specified in Schedule 2 Part 3 but with the addition of a 25mm layer of thermal bonded polyester with a mass of 200 g/m<sup>2</sup> and which has been cut to the same dimensions as the foam used in the test. Regardless of the foam used beneath the polyester wrap, the overall thickness of the foam layer and polyester shall be 75 mm (i.e. the thickness of the foam shall be reduced to 50 mm in order to maintain the overall thickness required by the test method).

There is an underlying issue with this question. One of the much vaunted reasons behind the proposals is that testing will be made in a way that is nearer to the reality of what is actually used in upholstery manufacture. An oft repeated saying is that present testing is made over a foam that is "illegal" in use. Unfortunately, and there appears to be growing evidence to confirm this from stakeholders making tests to the report of Flexible Foam Research that the specification of a foam that is more typical in use is going to prove more difficult than thought and most probably will result in an even more non-typical test specification being necessary and a test representing actual materials in use will prove illusory.

This also appears to lose sight of the fact that all testing is in some measure defined as being non-typical of actual use and it is the ability of a test to determine the comparative performance of the results on different materials that is critical. The need to be able to specify a test in terms that allow the best reproducibility would seem more relevant and indeed important.

Linking, as BIS does, the use of a less flammable foam to the reduction in chemical usage can only be considered as a virtual rather than a real change when it is linked to the maintenance of safety. There is only one way to reduce chemical usage through testing and that is by reduction in the calorific value of the flame applied and/or the time it is applied for. The rest is semantics.

The public consultation set out 3 rather than 2 policy objectives. These were:-

Cost saving to industry,

Greener furniture via FR reduction

Maintenance/improvement of fire safety

The result of the public consultation was that only 15-18% of stakeholders agreed that the objectives would be met.

On this basis the driving force for a change to Schedule 5 part 1 test foam has substantially collapsed and, noting also the effectiveness of existing test methods in the FFRs, we see no point in BIS pursuing it.

Additionally we continue to emphasize the following complexities in the CM foam area:

The foams found in UK manufactured furniture are produced to a highly diverse range of formulations, with varied flame retarding substances at diverse concentrations. It is likely that still more variants will be found in imported furniture.

To select one specific foam grade that will predict the match ignition propensity of a fabric across a range of underlying foams is an extremely difficult if not impossible task. Type and concentration of FR additive will inevitably affect the likelihood of fabric self-extinguishing within permitted limits.

Unless a global worst case foam can be accurately defined there is a significant probability of match ignitable furniture entering the supply chain. We are not in a position to specify such a worst-case grade/source.

If furniture manufacturers really wanted guarantees that all their furniture was match resistant they would need fabric test results for all the foams in their product inventory.

We predict confusion in the implementation and faltering legal cases around the new match test regulation - since the chain of custody and regulatory authorities will be oblivious to the possibility of different FR loadings in different sources of "specified" test foam.

There is even a possibility than unscrupulous stakeholders could deliberately engineer false passes by the use of specially formulated test foam.

We have conducted one initial test programme that illustrates how a range of different foam fillings can influence the match resistance of a nominated fabric. In such a study foam to "BIS spec" tended to be more of a "best case" than a "worst case" and it certainly did not create fail-safe match resistant composites. (This information is available to FW/6 members)

We have not conducted the above work with polyester fibre interlayer. It is possible that fibre layers may reduce variations due to different FR compositions, but conversely the FFRs do not preclude the manufacture of fibre-free furniture items.

Any chosen CM test foam will ideally be future proofed for changes in CM foam technologies and emerging FR additives.

The existing test foam should be sourceable globally but this is far from guaranteed for the new test foam (There is in fact only 1 UK manufacturer of the proposed spec at the present time). Could non-availability of the selected CM test foam in other countries be seen as a barrier to trade?

Following from point 6) the "BIS foam" has produced successful pass results. However in the FIRA/DTI grid test project which preceded the publication of the 1988 FFRs, combinations of this foam type with non-protective covers were not deemed acceptable. This is yet another demonstration of how the proposed changes are a relaxation rather than a tightening of fire safety.

<p><b>QUESTION 2</b></p>
<p><b>The BIS proposal sets out that hole formation must be recorded, where “hole” is defined as a hole greater than 2mm<sup>2</sup>. This concept is not new in textile fire testing and can be found (albeit with slightly different means of determination and dimensions) in numerous standards where a protective element is required, e.g. protective clothing standards such as BS EN 531, BS EN 532 and BS EN 5331.</b></p>
<p><b>Does BSI agree that the proposal on hole formation is sufficiently specified to ensure the robustness and repeatability of the test? If not, what additional specification should be used for the measurement and recording of hole formation for the purposes of these regulations?</b></p>
<p><b>COMMENTS ON QUESTION 2:</b></p>
<p>The accurate measurement of a 2 mm<sup>2</sup> hole in a cover fabric to determine if it is a protective cover or not, is at best a challenge and at worst near impossible when the possible shapes of these holes are considered i.e. uneven, curled etc.</p>
<p>Accurate measurement difficulty will cause repeatability problems across test houses giving massive variability in test results. Resulting in even the most diligent of manufacturers never having 100% confidence that their products consistently comply with the regulations.</p>
<p>The measurement of a 2mm<sup>2</sup> hole is very difficult, and other options such as using a probe may also be difficult to address risks where the burn is horizontal.</p>
<p>With regards to the requirements for the measurement of a hole. There are concerns regarding the repeatability of the test, which does not appear to be proved. There is evidence that there is considerable variability in the results from the current match test, caused by variability in the fabric. With such a tight tolerance in the new test it is highly likely that there will be more variability and hence more chance of non-compliance.</p>
<p>It is essential that research is carried out to assess the variability in results when using the new test fillings with a variety of fabrics in different laboratories.</p>
<p>It is therefore not clear whether the proposal will offer more repeatability and therefore the same, or higher, level of safety for the consumer.</p>
<p>We no longer feel that it is necessary to specify a hole if ‘filling 1’ is dropped from the proposals. If only a single filling material is used then the existing criteria are deemed sufficient without the addition of a new complication in determination and measurement of a hole. Even the presence of a hole would not necessarily be detrimental to the safety of the cover provided it meets all of the other current criteria for the match test and introduction of this additional criteria would probably result in many materials being removed from the market unnecessarily.</p>

This question sums up the inconsistency of the approach taken by BIS to the amendment of the FFR and it is difficult to make a calm and reasoned response.

It is a bad question from 3 standpoints a) the technical/practical proposal is impractical, b) the way it is argued shows a lack of understanding of the nature of textiles and c) it is used as the basis to determine the way upholstery is produced and compliance ensured. To fully understand the approach taken it is necessary to imagine a World where upholstery is produced from safety workwear fabrics and safety workwear is made from upholstery fabrics. The choice of fabrics and fibres is made on a completely different basis. Their response in the test as described will be totally different. Upholstery uses the mixing of yarns and fibres in fabrics to produce design and consumer appeal that is a complete contrast to the functionality of workwear. It must also be kept in mind that the additional specification of a PES scrim into the composite as tested has so far shown inconsistent results. Understanding the vicarious nature of such results and their impact on how industry will work with the new proposals is most important and needs a proper round robin approach to evaluation that has been sadly lacking so far.

This test is used to define choices in upholstery manufacture processes. The concept of assessing fabrics as being “protective“ in this way and offering a choice manufacturing routes is nonsense. The 40 mm zone used to specify the performance of components is unworkable in the circumstances. Producing compliant “hidden” items will be costly and difficult and taking in only fabrics that will not form a hole will significantly increase chemical usage.

The prospect of any test changing the status of fabric in process is unworkable in practice and industry will have to devise its own operating standards rather than use the BIS proposals. We have taken opinion from both coaters who treat fabric and upholsterers who cut fabric to make furniture but all agree that the proposal is not only unworkable but will actually lead to an increased usage of chemicals to achieve a non-hole formation result (BIS criteria failure!) as the cheapest and most practical option. It is extremely unlikely that a company could work with both approaches. It goes without saying that policing such manufacturing demands in terms of ensuring compliance will be impossible for TSO’s and anyone else trying to demonstrate due diligence.

When all is considered it is perhaps disingenuous to ask if the test proposal is workable without taking into account the way it is proposed to be used.

At the public consultation stage BIS have still to elucidate their detailed test method for the measurement of hole size. Such procedures need to be available for critical evaluation in the case of circular and non-circular (irregular) holes. However given the very small area limit for a finite hole we suggest that:

- 1) The measurement and control process will be an unrealistic burden for industry
- 2) There will be considerable scope for grey areas in the enforcement of this criterion with Trading Standards and the legal profession wasting a disproportionate amount of effort defining passes and fails.

<p><b>QUESTION 3</b></p> <p><b>The BIS proposal includes the removal of Schedule 4 of the Regulations (the Cigarette Test) on the grounds that test laboratories have reported that, historically, match resistant covers do not fail the cigarette test. Can BSI confirm, based on a review of this evidence, that removal of the Cigarette Test is justified on these grounds?</b></p>
<p><b>COMMENTS ON QUESTION 3:</b></p>
<p>There is not enough evidence to show that if a cover passes the proposed match test it will 100% guarantee a cigarette pass over any filling material and with any fabric.</p> <p>Experience has shown that some velour/velvet type fabrics can pass the match test but fail the cigarette test.</p> <p>It should also be remembered that traditionally natural fillings such as cotton have been widely used in furniture and this type of material has a high propensity to smoulder. If current trends were reversed and more natural cotton type fillings were to be used there is a high risk that a pass on the match test will not guarantee a pass with a smouldering cigarette.</p>
<p>It is agreed that in around 98 – 99% of fabrics, a cover fabric that satisfies the match test of the FFSR (Schedule 5) will satisfy that the cigarette test (Schedule 4).</p> <p>This would meet the policy objective of maintaining, or improving, current levels of fire safety.</p>
<p>We remain of the opinion that the cigarette test should be retained for all fabrics which fail the match test and those for which the use of a Schedule 3 interliner was permitted. Although there may still be a small number of fabrics which would fail a cigarette test despite passing a match test, analysis of member data suggests that this is likely to an insignificant number. We therefore agree that for other fabrics which pass the match test then the cigarette test may be withdrawn.</p>
<p>There are 2 issues presented here.</p> <p>Will a positive match test ensure that a cigarette test is unnecessary?</p> <p>Will taking the risk that the answer to 1) is positive represent no compromise on safety?</p> <p>There are immediate issues in the use of the word “historically”. When the Upholstered Furniture (Safety) Regulations were first introduced in 1980 a large proportion of textiles used were made from cotton whereas synthetic and thermoplastic – indeed petrochemical derived fibres – now dominate. The proposal seems to presume that we shall not move back to more sustainable sources of fibre and appears totally unaware of the behaviour of manmade cellulosic fibres such as modal. This concept does not sit well with the various allusions made throughout the BIS proposals to having greener upholstery as an objective.</p>

We seem to have a stance based on recognising how we make upholstery has changed whilst hoping we can do things differently in the future. To appear willing to take a risk on there being no reduction in safety if the change is made seems like a rather confused message.

Discussion in recent days towards completing this response has shown evidence of textiles tested in a UKAS test house in the UK passing the match test and failing the cigarette test.

Discussion and debate during the consideration of the BIS Proposals has discovered anecdotal evidence of the presence of cigarette burns on upholstery in the living circumstances of persons under review as to their care needs as being considered to be very significant. This may be evidence of the need of care to some but to us this is the living proof (quite literally) of the success of the present FFR. It would seem that BIS consulted a laboratory worker in this case when they should have spoken with a social care worker?

Throughout the consultation process BIS has failed to understand that open-flame (ie match) and cigarette ignition are mechanistically different and the former need not necessarily guarantee the latter. While manufacturers and test houses will have extensive data bases for the cigarette resistance of fabrics used within the current FFRs, these data bases will become redundant if changes are made to match test methodology to facilitate FR additive reduction. In such altered circumstances cigarette resistance is not a given.

If cigarette tests are not required, who bears the legal responsibility for the consequences of a furniture fire in the home initiated by a smouldering cigarette?

(Pro memo, CEN and NIST work has shown independently that RIP (Reduced Ignition Propensity) cigarettes are still capable of igniting smoulder-prone composites)

Also surely the abolition of cigarette testing would further encourage supply of non-compliant items by unscrupulous traders.

#### QUESTION 4

**The rationale for the BIS proposal is set out comprehensively in the attached technical paper. Does BSI agree that this provides sufficient evidence for the robustness and repeatability of the proposed new testing regime, and that this demonstrates that safety will be maintained, or indeed improved, relative to the existing test?**

#### COMMENTS ON QUESTION 4:

Not enough research has been carried out to prove beyond all reasonable doubt that the proposed changes will not affect public safety.

Also with the introduction of the proposed testing of currently unregulated materials based on whether or not a cover is protective or not the easiest way to compliance will be to increase the addition level of FR to maintain a protective cover. Thus negating the need to conduct addition testing on materials within 40mm of the outer covering fabric.

This is would be likely to increase the use of FR's rather than reduce their use contrary to the main objective of the proposed changes to reduce FR usage.

With the proposed reduction in the level of Fr treatment on cover fabrics we should not lose sight of the practicalities of common FR treatment methods i.e. it might be possible to demonstrate a pass result with a fabric and filling combination but there are a range of variables that can result in a test at a later date failing e.g.

Tolerances for backcoating recipe proportions, viscosity and film weights.

The fact that a range of fabrics of a similar type are coated at one time which increases the margin for error in their performance.

Tolerances in yarns resulting in variation in the weight and composition of the fabrics.

Acceptable variations between test houses producing differing results.

For these reasons the cutting back of the FR treatment to bare minimum is risky with the potential for a manufacturer to proceed in good faith only to discover further down the line the product fails.

The use of cover fabrics and fillings which perform satisfactorily in their own right has been the basis of the route to compliance for the upholstery industry for many years and has provided a good safety record in that time.

The proposed changes threaten to complicate the route to safety and compliance to such an extent that diligent manufacturers or suppliers will never be confident that their products consistently meet regulatory requirements.

The proposed changes would indicate that a substantial increase in testing would be required to maintain compliance, good for test houses but costly for manufacturers and consumers with the real possibility of reduced safety.

The technical paper contains a section regarding problems with the current match test and proposed measures to correct the problems.

The industry do not feel that there is sufficient evidence to show that currently unregulated products pose a safety problem as there is no data presented about any fires arising due to an internal component causing a house fire.

The technical paper is therefore challenged with regards to evidence that currently unregulated materials result in a product being unsafe.

The current test does allow materials to be used that have hole formation currently and this has not been demonstrated to pose any issues?

As the answers to questions 1 and 2 suggest that more research is required to prove the proposed new methods, it cannot be agreed that the BIS proposal is robust and repeatable enough to ensure that the current levels of fire safety are maintained.

Overall the revised proposal as modified by our proposals contained in this response are believed to maintain as a minimum the levels of safety imposed by the current testing regime. However there is a need to consider any wider implications of the changes to the tests affected, particularly in regard to changes to scope, labelling and enforcement.

The proposed changes to the regulations suffer from many mistakes where false concepts have been linked to unworkable criteria and without a realistic appraisal of the impact. This does not create a situation whereby individual technical questions can be addressed as individual items, rather the document as a whole and the way different aspects have been threaded through it must be addressed to fully deal with its failings.

The starting point is the theory of the mechanism of the match ignition test (page 12 of the BIS document under the title "Problems With The Current Schedule 5 Part 1 Match Test").

It must be recognised that this description is based upon a theory and that is based on observation and lacking in scientific and experimental data. We must consider it to be simply "an opinion". Furthermore extensive discussion and debate within the textile coating community since the publication of the document has shown a divided opinion on the merits of the theory. Basically no one agrees with it. The general theory that the thermal profile of the application of the flame is key and that any problems with the test can be solved by increasing chemical application is in the majority i.e. everyone involved in textile coating thinks it is so.

The air permeability values presented in annexe 1 are meaningless and probably intended to confuse. The critical point when any air permeability is relevant is somewhere near the time taken after first application of the flame and when the textile starts to reach the limits of the thermal profile of each fibre type – also known as the melting point. Air permeability would be difficult to measure in the state where all the fibres have coalesced into a molten mass. The flame retardant must prevent any gassing off from igniting thus releasing more energy into the test and significantly determining the pass/fail result. Testing items for air permeability in a raw state has no relevance to when the test is performed.

Limited evidence to date of the potential for using increasing levels of chemical when using the test proposed is amplified by the pass/fail criteria based upon a very odd idea of protective and non-protective being based upon an idea of defining hole formation. To then link this to a huge incentive to industry to use this route to simplify control of production i.e. whether to use FR treated components within 40 mm of the outer surface of a piece of furniture will definitely require the use of more chemical. This will be the cheaper and simpler approach barring the development of some workaround or avoidance that will bring about the same result at lower cost and/or with more certainty. The inventive nature of the business will ensure that this probably will happen. The BIS proposals do not (indeed cannot) factor in what that could be. The idea that such a large influence on the whole management of how furniture is made will hang on interpretation of the size of a hole in a flame test on an upholstery fabric is a bizarre concept to consider. This conclusion is based on comments made by upholstery manufacturers.

The reasoning behind the original regulations that the prime fabric testing was considered important as being protective of a flammable filling based on a worst case scenario of an easily specified flammable foam filling was a very different concept to the proposed change and the specification of the multifarious “non-tested” components was considered too complex and difficult. The simplicity of the original concept was key to its success. The biggest probable failing of the BIS proposals is therefore the idea that it can deal with this issue. To do this without apparently having any idea of the consequences for industry is not acceptable.

It is unfortunate that the document has also played with the area of argument in the policing of the FFR. To entertain the idea that safety is a negotiable point when we are considering whether or not a fabric actually passes a test would seem to have lost the plot? The idea of the worst case scenario would seem to be foreign to some. To claim a better relationship to actual manufacture practice not only misses its objective but demonstrates a lack of understanding.

It may be necessary to re-visit the idea that testing and performance are not in themselves a guarantee of safety or “safe” but merely a tool to screen materials used against what may be arbitrary criteria. It is the application of those standards to manufacture linked to assessment of the end effect as seen in the Greenstreet-Berman report that validates the idea. Policing can then be based on pass/fail criteria. It is unlikely that the proposals will lend themselves to such a simple result.

Other areas of doubt:

The thermally bonded polyester fibre wrap is dismissed as being easily specified and in any case not offering any significant variations. We quote: “The new element which has been introduced is the thermally bonded polyester fibre. This could be specified much more tightly but this is unnecessary because the purpose of the inclusion of this fibre is to modify the physical set up of the test assembly.” (see comments on burning theorising)

The production of such low cost and high volume fleeces depends on sourcing the absolutely cheapest source of polymer for fibre production and the poorest quality of fleece production. It will be difficult to correlate such low requirements with a dismissive conclusion that such widely varying quality will not be important in the test. These fleeces will vary widely across all dimensions in terms of density and thickness.

And

We have already pointed to the credibility gap apparent in justifying the use of determining hole formation in a test sample by equating the type and nature of workwear textiles with those used in upholstery manufacture in our response to question 2.

And

There are some interpretations on the arguments about pass and fail and safety in the supply chain and more relevant in legal terms. The FFR does not in itself provide safety that can be exactly defined but that by establishing performance standards for components we have been able to improve safety as shown by the results of actual fire incidents.

There is a general perception that the BIS proposals have failed on all of its set out criteria –both those made such as the Red tape Challenge and subsequently forgotten and those that have been added later.

It will not improve safety – rather the opposite.

It will not be greener and anyway it is taking a false approach to sustainability based on an apparent lack of understanding.

The technical paper contains no hard scientific evidence that existing fire safety will be retained or improved and in public consultation only 15% of stakeholders supported this claim by BIS.

As we have previously pointed out, BIS have considered only ignitability and ignored other important parameters such as rate of fire development/rate of heat release/time to peak that are pivotal to escape time and flashover in a real domestic fire situation.

Having said this even within the BIS October 2014 Technical Paper (Page 26) there are examples of constructions which fail existing requirements but would pass the proposed new ignition tests.

The following is a list of reasons why we consider the new procedures constitute reduced fire safety

Reduced application levels of FR additive can only deliver a diminution of fire protection. It is unrealistic to expect any other possibility.

The proposals encourage a move to un-protective covers and increasing thermoplastic fibre content. Some fabric constructions (eg polyolefin) that are currently precluded may re-enter the UK market. Melting fabrics create pool fires in a real life fire situation. Pool fires increase rate of heat development etc – authors such as Ames and Babrauskus suggest a 50% contribution to total heat release. BIS have not sought to investigate or disprove this important consideration.

There is every reason to expect that fires will peak at shorter times than they do currently

Under the existing test regimes uncontrolled, match-ignitable components at the furniture surface (such as piping) are encased within match resistant/match protective textile. The new proposals will allow the use of such items within non-protective cover and therefore increase the propensity of match ignition at the furniture surface.

Existing methodology generally ensures that (accidentally or deliberately) non-compliant fillings will still lead to match resistant furniture. This will be lost under the proposed new regime. In the light of Trading Standards non-compliance records variously presented throughout the consultation the potential impact of non-compliances should not be underestimated.

Similar to 4), the existing test foam is a pretty reliable worst case filling, but CM test foam is not worst case for all those fillings that are required to pass only the flame 2 test. Robust evidence is needed that the fibre interlayer test is a worst case approach for all furniture fillings.

## **Annex 7: Draft Regulations - The Furniture and Furnishings (Fire Safety) Regulations 2016**

This information is attached as a separate document.



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