2016-046

FIRE BRIGADES UNION

CONSULTATION

DEPARTMENT FOR BUSINESS, ENERGY & INDUSTRIAL STRATEGY

NOVEMBER 2016

Introduction

This is the Fire Brigades Union (FBU) submission to the Department for Business, Energy & Industrial Strategy (BEIS) consultation on the *Furniture and furnishings fire safety regulations: proposed changes (2016),* published on 14 September 2016 which seeks views on government-proposed changes to the Furniture and Furnishings (Fire) (Safety) Regulations 1988.

The FBU is the democratic, professional voice of firefighters and other workers within fire and rescue services across the UK. We represent the vast majority of wholetime (full-time) and retained (part-time, on-call) operational firefighters and control staff.

Summary

- **The FBU believes that putting the testing issues to a consultation exercise misses the point entirely. This whole proposal is not a matter of opinion whose rightness or wrongness can be gathered through some kind of democratic questionnaire. It is a matter of fact that can only be proved or disproved by practical experimentation.**

- The new consultation proposal appears to be an improvement over the 2014 proposal, but it is still based on theory and completely lacking in any supporting evidence and is a worsening of the provisions of the 1988 regulations.

- A change, even of this slightly reduced magnitude, to the Furniture Regulations cannot be introduced without carrying out tests to see whether or not it will deliver what it is intended to deliver.

- As an absolute minimum, the proposed new tests need to be fully specified and put through a round robin to ensure that they are repeatable.

- Ideally, materials that were part of the round robin tests should then be built into a series of identical pieces of furniture that are ignited to confirm that passing/failing the tests is truly an indication of real fire performance.

- Until the above measures which are reasonable, achievable and realistic are undertaken, it is not possible for any conclusions to be made definitively. It is difficult to imagine why carrying out the test as described would be avoided.

New match test for covers

The current test (the 1988 test) for cover fabric involves covering a piece of combustible foam with fabric and exposing it to a flame (See Figure 1):

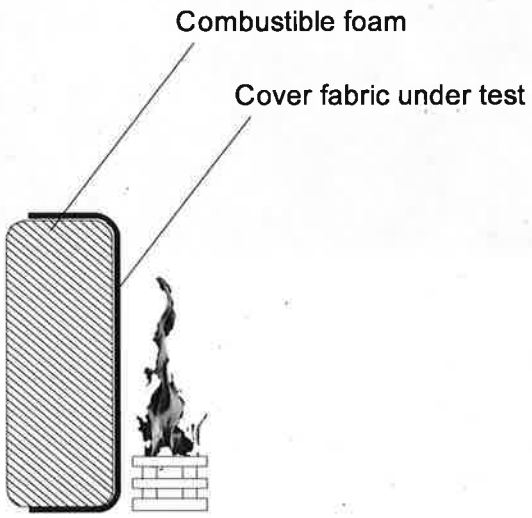

Figure 1, sketch showing the 1988 test

If the fabric catches fire, it fails the test and can't be used as a cover fabric in furniture unless it has a non-combustible "interliner" inserted between it and any foam.

The case for change was that this test is unrealistic because combustible foam actually feeds a fire and so encourages the cover fabric to burn. This means that large quantities of fire retardant chemicals have to be used to coat fabric so that it can pass the test.

But combustible foam is not allowed to be used in real furniture. It is a contravention of the Regulations.

In real life furniture use, using flame retardant foam, a fabric will not ignite even with much less fire retardant coating than is used in the test because the fire retardant foam does not contribute to the ignition.

In short, fire retardant chemicals are expensive and harmful to the environment and to public health, and yet large quantities have to be applied to upholstery fabric just so that it can pass an unrealistic test. Much smaller quantities could be applied and, even though the fabric would not pass the test, it would be difficult to ignite when used in real furniture because it would be over fire retardant foam not combustible foam.

So in 2014 it was proposed to introduce a new test where fabric is tested over combustion modified foam. The theory was that such a test would be more indicative of real furniture construction so less fire retardant chemicals would be needed on the fabric to achieve a test pass (See Figure 2).

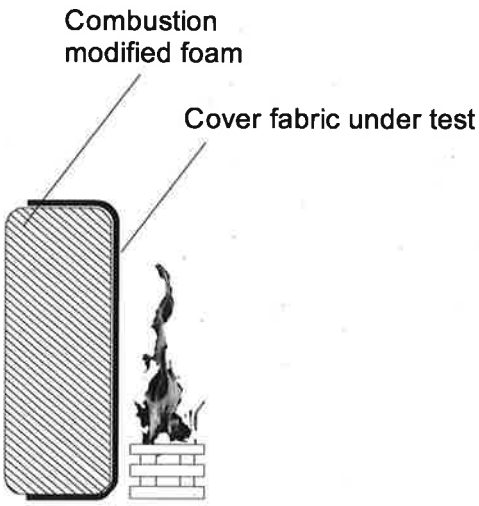

Figure 2, sketch showing the 'filling 1 test'

The filling 1 test is identical to the 1988 test except that it uses combustion modified foam instead of combustible foam.

But another complication was that the current trend in furniture manufacture is to use a 'fabric wrap' over the foam - fabric wraps are combustible. Apparently they are formed of a soft manmade material intended to soften the feel of the furniture and to prevent the cover fabric abrading on the foam.

So a second new test was proposed to run alongside the first in which a fibre wrap is included in the test (See Figure 3).

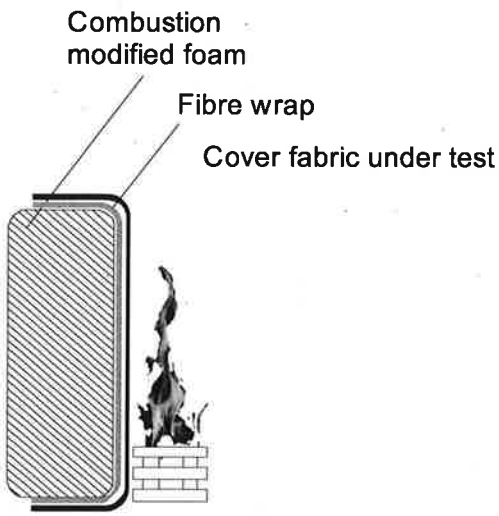

Figure 3, sketch showing the 'filling 2 test'

Consultation proposal

During the consultation process, the fire sector argued as follows – particularly against the Filling 1 test:

- There are several types of combustion modified foam, some give off gases when they are heated which inhibit burning. Others work in a different way.
- Since there is no definition within the proposal of the type of "combustion modified foam" that should be used in the test, a fabric could be tested over one foam but actually used over another foam.
- So the fabric could pass the test because it was applied over a foam that would help to stop it catching fire (See figure 4).

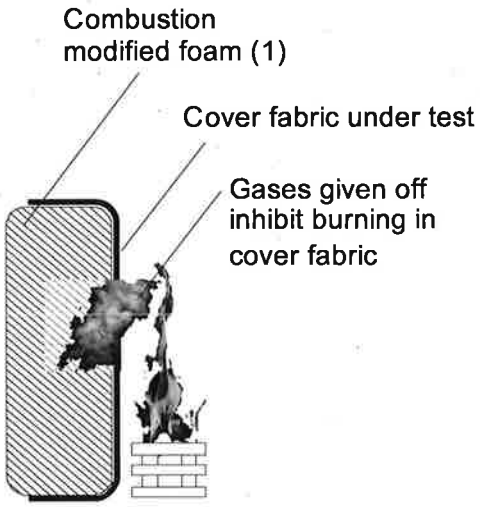

Figure 4

- But it could then be used in furniture over a foam that would not help it to stop catching fire (See Figure 5).

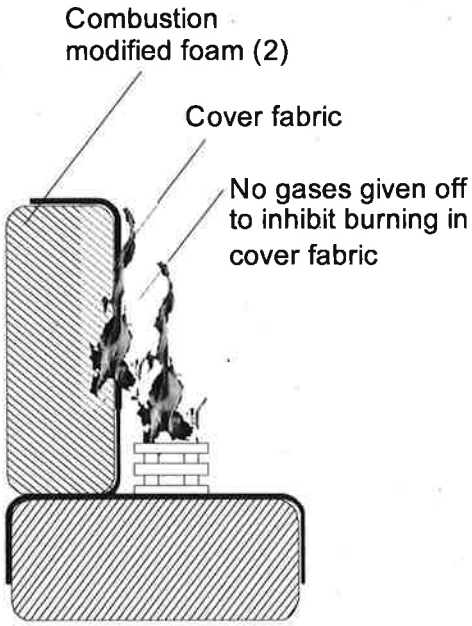

Figure 5

Note: Foam industry tests have revealed that this scenario is quite possible, and of course there is even a possibility than unscrupulous stakeholders could deliberately engineer false passes by the use of specially formulated test foam.

There was also a concern about "back insulation".

Setting fire to a postage stamp is easy. Just apply a match to it and it burns. But stick a stamp to a plastered wall and it is very, very difficult to set fire to it. The reason is that the heat from the match is transferred and dissipated by the non-combustible plaster behind the stamp and the stamp itself never gets hot enough to catch fire. The stamp is 'insulated' from the heat by material behind it, so this effect is called 'back insulation'. The concern was that the new tests, carried out on non-combustible foam, would display back insulation. The fabric would pass the test because of back insulation, but if a heat source was applied to the fabric on the part of a sofa where it was not back insulated, the fabric might easily burn.

This was particularly a concern in the proposed filling 1 test where fabric under test would be stretched over a combustion modified foam substrate. However in the latest 2016 consultation proposal the filling 1 test has been dropped and the suitability of a fabric will be wholly based on the filling 2 test. This may be a slight improvement because:

1. The fibre wrap in the filling 2 test insulates the foam from the test flame so it is claimed by the developers of the new test that the mechanism of fire resistance of the foam has no effect on the fabric.
2. The fibre wrap is so light weight that it holds the cover fabric in the test away from the foam and the developers of the new test claim that this prevents any back insulation.

It is good (if not a little late in the day) that the consultation document says that the fibre wrap will be defined by the time the new test is published in a revised set of regulations. It is already the case that non-combustible foam is not defined, and we understand that the tightness of the fabric over the foam has not been defined either. To have failed to define the fibre wrap as well would have been to make a mockery of the word "test".

However what is important when developing any test like this is repeatability. That is, if I produce an upholstery fabric, will I get the same result (pass or fail) regardless of which laboratory carries out the test? In this case, the fibre wrap is poorly defined in the test, and it is understood that the tightness of the fibre wrap and the fabric round the foam is not specified either. This is a problem for fabric manufactures and test houses alike because one laboratory could construct a test one way, and another laboratory another way. But it is also a problem for fire safety because with so much flexibility in the parameters of the test, a fabric could be 'set up' so that it passes a test, but it could ignite with ease in real life use.

And of course, if all this is true and the filling 2 test negates any effect from the combustion modified foam, it will not reduce the need for fire retardant chemicals in the cover fabric – which was one of the main objectives of revising the test.

The underlying problem that still remains is mentioned in Annex 6 of the consultation document on page 48 where it is said:

> *"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".*

The current proposal is certainly not as bad as the previous changes proposed in 2014, but these proposed new tests need to be tried in as many laboratories as possible using an identical range of cover fabrics. We then need to see if all the laboratories pass and fail the same fabrics.
It would then be interesting to get a set of identical arm chairs made using the different fabrics and to see if the real fire performance reflected the pass/fail results of the test.
Only with all that information could anyone say with certainty whether the tests are fit for purpose and whether they represent a non-worsening of fire safety.

Until such time as (a) the test have been conducted and (b) the results of those tests conclusively show an improvement to the safety standards, there should be no change to the 1988 standards.

Consultation questions

As part of the consultation on the 2014 proposals, the first question asked was:

"Do you think this proposal will achieve its aims of: helping to make UK furniture greener, save money to industry and making UK furniture more fire safe?"

In this 2016 consultation, no such question is asked. Could it be that BEIS know that if they ask that question again, they will get exactly the same answer as they did last time:

"Saying whether or not the proposal will achieve the aim of making furniture more fire safe is simply guesswork until such time as the test itself is tested by laboratories other than Intertek. Such comparative tests should have been carried out long before a public consultation exercise."

Removal of cigarette test:

The removal of the need to undergo a cigarette test for fabrics that pass the match test is predicated on the current trend towards using man-made fabrics rather than natural fabrics.

Natural fabrics like cotton tend to smoulder and so they are more likely to succumb to cigarette ignition even if they pass the match test. But apparently the current trend is away from natural fabrics.

The problem with this, as with the use of fibre wraps in the proposed new match test, is that that is based on "current trends" in furniture manufacture. What happens if "current trends" change? Does the proposed test regime leave the door open to unsafe furniture being placed on the market before the regulations can be updated yet again to catch up with "current trends"?

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

Questions

Name: Fire Brigades Union
Address: Bradley House, 68 Coombe Rd, Kingston-upon-Thames, Surrey, KT2 7AE

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

Questions on scope

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

☒ Yes ☐ No ☐ Not sure

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

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

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

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

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

Questions on testing

Q7 Do you agree to removing the Filling 1 option?

☒ Yes ☐ No ☐ Not sure

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: The chemical composition of the filling and both the chemical and physical composition of the wrap are not defined in the consultation document and will probably not be defined in the final Regulations. It will therefore be impossible to achieve test results that are repeatable between test houses making enforcement impossible and leaving the door wide open for completely unsuitable materials to reach market.

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

☒ Yes ☐ No ☐ Not sure

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

☒ Yes ☐ No ☐ Not sure

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

☐ Yes ☐ No ☒ Not sure

Comments: The problem is the proposed ignition test for these materials. It is ill defined so it will be impossible to achieve test results that are repeatable between test houses making enforcement impossible and leaving the door wide open for completely unsuitable materials to reach market.

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: The idea that there is no need for a cigarette test on materials that pass the match test is based on 'current trends in furniture design'. Hence, embedding this proposal in the regulations will make their suitability entirely dependent on the vagaries of fashion.

Questions on traceability and enforcement

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

☒ Yes ☐ No ☐ Not sure

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

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: There is no common international symbol that could be appropriate.

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

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

☐ Yes ☒ No ☐ Not sure

Comments: Questions 8 and 10 in particular are not appropriate for a consultation process. Their answers are not a matter of opinion, they are a matter of fact that can only be assessed by demonstration and experimentation. The only way to determine whether or not the proposed tests are suitable and agreeable is to carry out the proposed tests and examine the results – asking the opinion of stakeholders in a consultation exercise is nonsense. But even after more than two years and during a second consultation exercise, we are still told that the proposed new test has not been finalised – the composition of the fibre wrap is yet to be defined.

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