TEXTILE LABORATORY SERVICES.

Dear Terry

Thank you for sending the FFR Proposal document dated August 2014

I have seen some previous documents which were not at all clear to me – this is considerably better so I hope I have understood it well enough to be able to make some comments.

When the original scheme was launched in 1988 I was not involved but as you probably know we have had working experience of it since the early 90's.

Is the reform of the Regs urgent?

My view is that on the whole it has worked rather well for labs and the industry and also for the general public in that furniture fire deaths and injuries are considerably reduced and it is a workable scheme. This long real life evidence suggests caution is required in modifying the regulations.

The 1988 Regs set out to provide a clear and workable system in that it concentrated on dealing with the most important elements in furniture in respect of fire viz
Foams
Fibre and other loose fillings
Cover fabrics
Invisible Fabrics

All these are tested and certified at source and are verified by due diligence testing by the users and enforcement agencies.

The system works well for furniture manufacturers because it is simply a matter of using pre certified materials.

If the revised scheme does not use pre-classified materials and relies on extensive testing of composites at furniture manufacture/distribution level it risks becoming too complicated to function well.

In my view the improvement of the Regs should avoid rushed conclusions based on very limited evidence so a 2 year (at least) program leading to a well evidenced and tested scheme is the way to go

Polywraps

The existing regulations are silent on minor components such as webbing, adhesives and polywraps.

I have used the word "polywrap" because this seems to be the usual way to describe the wrap often found around foams in upholstered furniture items.

Polywrap is usually made from polyester in the form of a carded batt – ie loosely connected fibres. This wrap is sometimes held in place by adhesives and sometimes not.

If this material is that described in the proposal para 28 then at least some of them are in fact materials that are FR and meet the source 2 test

Hopefully research before the regs are changed could identify a test or construction parameters to identify which "polywraps",if any, can be safely included – and the same for adhesives.

At least some existing polywraps are FR and are tested – we have some clients who get us to test them as fibre fillings which we do by assembling them in sufficient layers to make the required 75mm thickness which we then test using a Source 2 flame. We report the results quoting the number of layers and the density of the test specimen.

The density of the material has a strong effect on the fire performance so in theory it would be possible for the upholsterer to apply it to the wrap around the foam pad at a low density – however the wraps we have seen when testing dismantled furniture shows a density which appears at least as dense as the specimens we test as described above.

Assessment of the fire risk

The document asserts that the proposed changes will not increase the fire risk but is not supported by any evidence that I can see.

In the present scheme the use of non combustion modified foam in the match test is intended to provide a safety margin and its replacement by combustion modified foam would be expected to reduce or remove this safety margin.

The use of non combustion modified foam has the merit of disqualifying thermoplastic fibre fabrics (including inherent FR materials) whose response to a thermal attack is to melt, and form a hole thus allowing the ignition of the highly flammable foam underneath. Note: other fabrics also form a hole or split but as long as there is sufficient FR in the back coat they can pass.

In my view it would be beneficial to use the extra 2 years before the planned additional revision of the regulations to conduct experimental work to check that the changes do not result in an unacceptably risky situation. This work would include exposing foam&/or fibre/fabric combinations to Crib 5 thermal attack (thought to be equivalent to eg burning newspaper in a real fire situation)

Omit the cigarette requirement?

Cigarette test fails are rare but are spectacular when they do occur. This mainly affects cellulosic materials in 100% form. Burns can be hidden until temperatures reach bright red heat and are then difficult to extinguish. USA/Canada seem to be

mainly (only?) concerned with cigarette fires. We would support keeping this test at least for these fabrics.

Toxic Hazard

The new emphasis on tuning the FFR's to reduce the risk of toxicity seems to me an instance of "mission creep". We would prefer separate regulations (eg REACH) that restrict or forbid the use of risky chemicals so that when less toxic treatments become available there will be no need to revise the FFR's again. We are told that the usage of "Deca" (Decabromo diphenyl ether) is now much reduced and replaced by "Penta" (Pentabromo diphenyl ethane). This has happened without being forced by a change in the FFR's.

Possible other topics not elaborated at this stage

Development of barrier technology to minimise use of "toxic" FR agents

Gather evidence of toxic effects of existing products

Recommended project work during the 2 year experimental period