FLAME RETARDANCY (FR) STANDARDS (INTERNAL BLINDS)

There is no direct mandatory requirement for flame retardant materials in blinds for domestic or commercial use. However, under the Regulatory Reform (Fire Safety) Order 2005, the choice of performance and durability requirements is a decision to be made by the nominated 'Responsible person' who is accountable for the fire safety of the premises. Read this guidance note to find out about the Standard and flame retardancy.

1.0 INTRODUCTION

The British Standard '*BS 5867-2:2008 Fabrics for curtains, drapes and blinds. Flammability Requirements.'* does not reference any specific mandatory ignition resistance requirements for different end-use products in various premises (e.g. blinds in residential properties, offices, hotels, hospitals, etc.). Instead it describes the requirements for ignition (see Section 3.1) and durability (see Section 3.2) and testing levels for the flammability of fabrics intended to be used as blinds, drapes or curtains.

2.0 WHAT IS FLAME RETARDANCY (FR)?

Some materials are inherently flame resistant through their structure and this makes them non-flammable. Other materials can have an additional coating applied to them (through dipping or spraying) to make them flame retardant. FR materials inhibit the ignitability when exposed to a flame and also slow down the rate of flame spread.

3.0 FR REQUIREMENTS FOR BLINDS IN BUILDINGS

There is currently no specific mandatory requirement to use FR materials in blinds for domestic or commercial use.

The Fire Protection Association advised:

"Regulatory Reform (Fire Safety) Order 2005 (RRO) and the requirement for a 'Responsible person' (normally the employer or the building owner) to ensure the safety of a premises applies to all aspects of a premises including furniture and furnishings and will be heavily influenced by the end use of the premises.

So, although non-domestic furniture and furnishings is not subject to fire safety controls through direct legislation, its fire safety behaviour is regulated indirectly by the RRO.

The only piece of legislation that may impact directly is the General Product Safety Regulations 2005."

Responsible person/building owner also needs to establish the required ignition resistance of the material used for the premises. This requires thorough knowledge of the end-use environment so that a suitable assessment can be made.

NOTE: FR materials are often a requirement of the local Fire Officer who may not grant a fire certificate if non-FR materials are used. The client's insurer may also require FR materials.

There are government fire risk assessments for all types of premises - see Appendix 3.

3.1 IGNITION REQUIREMENTS

The Standard *BS 5867-2:2008* describes ignition performance requirements for different risk levels and details typical examples of associated premises (see below).

3.2 PREMISES & DIFFERENT IGNITION RESISTANCE

PREMISES	TYPE A LOW RISK	TYPE B MEDIUM RISK	TYPE C HIGH RISK	TYPE C VERY HIGH RISK
	Colleges	Casinos	Sleeping accommodation in certain hospitals wards and in certain hostels	Locked psychiatric accommodation
	Day centres	Hospitals		
	Exhibitions	Hostels		Prison cells
	Museums	Hotel bedrooms		
	Offices	Places of entertainment		
	Schools	Public buildings	Offshore installations	
	Universities	Public halls		
		Public houses and bars		
		Restaurants		
		Services messes		

3.3 EXAMPLE PREMISES & IGNITION RESISTANCE

PREMISES	IGNITION RESISTANCE
Educational institutions	Type B
Hospitals and other healthcare facilities	Type B
Certain hospitals wards (higher risk areas)	Type C
Residential care	Type B
Hotels and boarding houses	Type C
Licenced premises and public entertainment venues	Type B
Offices	Type A

4.0 RECOMMENDED USE OF FR MATERIALS

The BBSA recommends that only FR materials are used in commercial and public buildings.

The Hackitt review on Grenfell may well lead to changes to FR requirements in High Rise Residential Buildings (HRRBs) and also in multi-occupancy and institutional residential buildings that will have an impact on our trade.

As a result, the BBSA also recommends that only FR materials are used for internal blinds in HRRBs.

5.0 STANDARDS OUTSIDE THE UK

There is no European/harmonised standard for FR and as such each countries standards are different. If a product is required to be compliant with the relevant standard in the UK (BS 5867), then it will have to be tested to this standard.

International standards are different; these include:

- DIN 4102 - class B1 or B2 (Germany)
- NFP 92-503 - class M1 or M2 (France)
- NFPA 701 (USA)
- Can/ULC—S109-03 (Canada)
- AS/NZ 1530.3 (Australia/New Zealand)

6.0 FURTHER INFORMATION

To purchase copies of British Standards visit the British Standards Institute (BSI) website:
http://shop.bsigroup.com/ProductDetail/?pid=000000000030168543

BSI also sell EN (European) and ISO (Global) standards although a much cheaper source for EN standards is the Estonian Standards Institute:
http://www.evs.ee/

This guidance note has been produced in line with the guidance from the Fire Protection Association (FPA).
Reference has been made to a guide produced by the Furniture Industry Research Association (FIRA): 'Fire safety of furniture and furnishings in the contract and non-domestic sectors. A Guide to the UK requirements'.

APPENDIX 1: RESISTANT VERSUS RETARDANT FABRIC

RESISTANT FABRIC/MATERIAL

	RESISTANT = OCCURING THROUGH STRUCTURE (THE STRUCTURE OF THE FABRIC/MATERIAL)
FIRE	Fire resistant materials naturally resist burning and withstand heat. These materials are often of non-organic, non-carbon based nature (e.g. stone, concrete, steel).
FLAME	Flame resistant materials are inherently non-flammable. Flame resistant fabrics have non-combustible fibres woven into fabric (built into chemical structures) preventing the spread of fire for the lifetime of the fabric. They will not melt or drip when in close proximity to a flame. However, as they are not usually made from 100% flame resistant materials, they will burn, but will do so very slowly and are often self-extinguishing.

RETARDANT FABRIC/MATERIAL

	RETARDANT = ACHIEVED THROUGH APPLICATION (THE APPLICATION TO THE FABRIC/MATERIAL)
FIRE	Fire retardant is the term used for materials that have been topically treated with a fire retardant chemical either in an immersion process after the fabric has been woven, or by coating or spraying. All cottons and other natural fibres including some synthetic fabrics that are topically treated are certified as flame retardant (FR). Fire retardant materials are designed to burn slowly (and as such reduce fire hazard) but will all burn under certain circumstances. If exposed to a sufficiently large and sustained fire, the fire retardant fabrics will burn vigorously.
FLAME	Flame retardant fabrics are often organic, carbon containing materials that are chemically treated to be slow burning or self-extinguishing when exposed to an open flame. These fabrics can be made from any material, but they must be treated with special chemicals to qualify as flame retardant (FR). Most flame-proofing chemicals are water soluble and will dissipate through washing or dry-cleaning. Re-treatment may be required over time.

APPENDIX 2: THE STANDARDS REQUIREMENTS

REQUIREMENTS FOR IGNITION RESISTANCE & TEST METHODS

	TYPE A LOW RISK	TYPE B MEDIUM RISK	TYPE C HIGH RISK
IGNITION RESISTANCE REQUIREMENTS	All fabrics shall be tested prior to cleansing. Unless the performance specification details that test after an approved cleansing or wetting procedure is necessary all fabrics shall be tested after being subjected to the appropriate procedure.	All fabrics shall be tested prior to cleansing. Unless the performance specification details that test after an approved cleansing or wetting procedure is necessary all fabrics shall be tested after being subjected to the appropriate procedure.	All fabrics shall be tested before and after be4ing subjected to the appropriate cleansing procedure.
TEST METHOD	BS EN ISO 6941:2003 Procedure A (surface ignition)	BS EN ISO 10528:1995 Procedure A (surface ignition)	BS EN ISO 10528:1995 Procedure A (surface ignition)

REQUIREMENTS FOR DURABILITY

A number of durability requirements must be considered:

All fabric and fabric assemblies, whether for use in Type A, B or C environments, must be tested before any cleansing procedure.

In addition, all fabric and fabric assemblies for use in Type A and B environments shall be subjected to any relevant cleansing process prior to ignition testing as required by either the performance specification or as required by information provided on the care label.

It is strongly recommended that fabrics intended for use in Type B environments are tested before and after cleansing if the fabric has been subjected to FR treatment.

Fabric and fabric assemblies intended for use in Type C environments must always be tested before and after 50 cycles of standard washing according to BS EN ISO 10528:1995.

APPENDIX 3: FIRE SAFETY RISK ASSESSMENTS

The government have produced 13 fire safety risk assessments. The 10 most relevant are:

Offices and shops - ISBN: 978 1 85112 815 0
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/422175/9449_Offices_and_Shops_v2.pdf

Factories and Warehouses - ISBN: 978 1 85112 816 7
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14882/fsra-factories-warehouses.pdf

Sleeping accommodation - ISBN: 978 1 85112 817 4
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/422192/9281_Sleeping_Accomodation_v2.pdf

Residential Care Premises - ISBN: 978 1 85112 818 1
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14885/fsra-residential-care.pdf

Educational premises - ISBN: 978 1 85112 819 8
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14887/fsra-educational-premises.pdf

Small and medium places of assembly - ISBN: 978 1 85112 820 4
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/422195/9294_Small_Mediumt_v2.pdf

Large places of assembly - ISBN: 978 1 85112 821 1
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14889/fsra-large-assembly.pdf

Theatres, cinemas and similar premises - ISBN: 978 1 85112 822 8
https://www.hwfire.org.uk/assets/files/theatrescinemasandsimilarpremises.pdf

Healthcare premises - ISBN: 978 1 85112 824 2
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14892/fsra-healthcare.pdf

Transport premises and facilities - ISBN: 978 1 85112 825 9
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/14894/fsra-transport.pdf