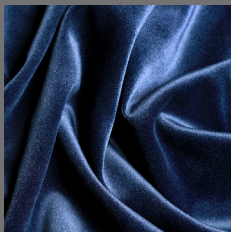
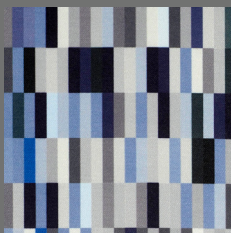


Reference Guide to Flame Retardancy of Contract Furnishing



Pamaz[®]
Innovation in contract fabrics

| INTRODUCTION

| The Importance of Making the Right Decision

From October 2006 all non-domestic premises in England*, Wales* and Scotland** were required to comply with a new fire safety order. Failure to meet the requirements of these regulations could lead to prosecution, which leads to hefty fines on conviction. This order replaced the previous fire legislation and any fire certificates issued under the Fire Precautions Act 1971 ceased to have effect.

This compact booklet is intended as a quick reference for Interior Designers and Architects to the flame retardant requirements applicable to curtains, bedding, upholstery and beds used in **contract** applications or **non-domestic** dwellings. It should not be used in isolation when assessing risk, but should give a guide to the minimum technical performance required of **contract** curtains, upholstery, bedding items and beds.



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*Regulation Reform (Fire Safety) Order 2005

** Fire (Scotland) Act 2005

Source of Data www.opsi.gov.uk and www.communities.gov.uk

| CURTAINS INCLUDING SHEERS

There are no requirements for flame retardancy of any drapes used in a **domestic** or private residential environment.

Any drape used in a **contract** setting is subject to flame retardant requirements.

| **BS5867 Part 2 Type B** **Hotels, Public Buildings and Offices**

- Face Ignition test (Flame applied for 15 seconds)
- Pass = Flame does not reach any edge of fabric test piece
- Pass = No flaming debris from fabric test piece

| **BS5867 Part 2 Type C** **Hospitals and Healthcare Environments**

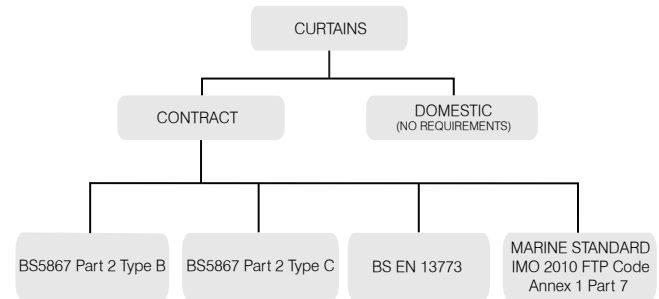
- Face and Back Ignition test (flame applied for a range of application times)
- Wash requirement to 50 washes (for FR treated fabrics)
- Pass = Any resultant afterflame must cease within 2.5 secs

| **BS EN13773 : 2003** **Harmonised European Standard**

- Edge ignition test with Radiant heat source applied to the fabric test piece
- Combination of EN1101 and EN13772

| **Marine Standard: IMO 2010 FTP Code Annex 1 Part 7**

- Edge and Face ignition test (propane gas flame applied for 5 and 15 second intervals)
- Pass = Any resultant afterflame must cease within 5 seconds



| BEDDING ITEMS AND BEDS

Under **domestic** regulations only the product filling for bedding items requires to be tested.

Under **contract** regulations these are the following standards which may be considered for the fabric being used:

| **BS7175 : 1989** **For Bed Covers, Bedthrows and Pillows**

- Cigarette, Match and Crib ignition sources are used to satisfy the safety level based on a risk assessment and tested on complete unit ie pillows, quilts.

| **Marine Standard IMO 2010 FTP Code Annex 1 Part 9**

- Cigarette and Match ignition sources are used with additional fuel source (increasing the harshness) in the form of a cotton pad on top of the flame source

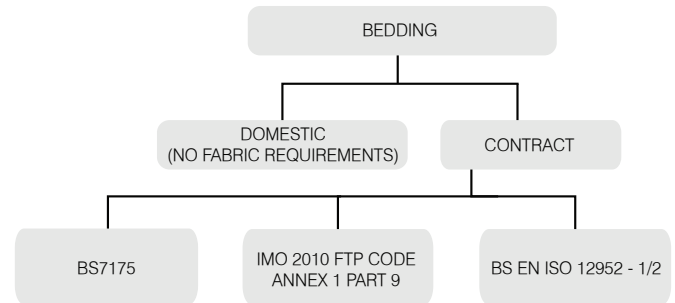
| **BS EN ISO 12952 – 1/2 : 2010**

- Cigarette and match ignition source are used for assessment of ignitability of individual bedding items

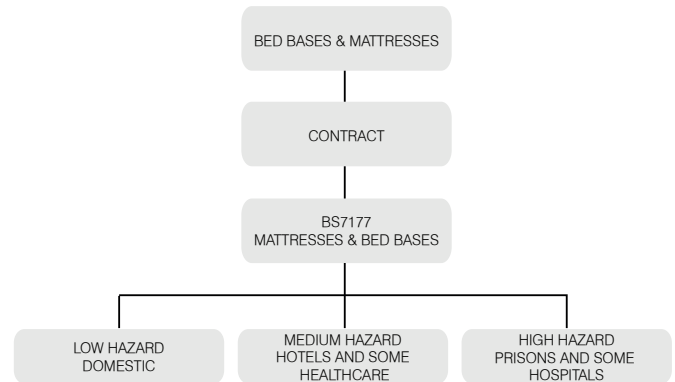
| **BS7177 : 2008 & A1 : 2011** **For Bed Bases and Mattresses**

- Performance standard including three levels of hazard Low, Medium and High
- Low Hazard | Cigarette and Match | Domestic
- Medium Hazard | Cigarette, Match and Crib 5 | Hotels and some Healthcare
- High Hazard | Cigarette, Match and Crib 7 | Prisons and some Hospitals

| BED BASES & MATTRESSES



| BEDDING ITEMS



| UPHOLSTERY & HEADBOARDS

There are specific regulations for upholstered furniture used in **domestic** environments. The regulations require a pass to **BS5852 part 1 : 1979 cigarette and match test**. Test must be conducted over specific non FR foam.

Upholstered furniture used in a **contract** environment may be tested in the following way:

| Performance Standard BS7176 : 2007 & A1 : 2011

This is a performance requirement that uses test methods BS5852 & EN1021 – 1/2 over a specified FR foam and includes 3 Hazard levels

| Performance Standard BS7176 – LOW HAZARD

Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) sources
Offices/schools/colleges

| Performance Standard BS7176 – MEDIUM HAZARD

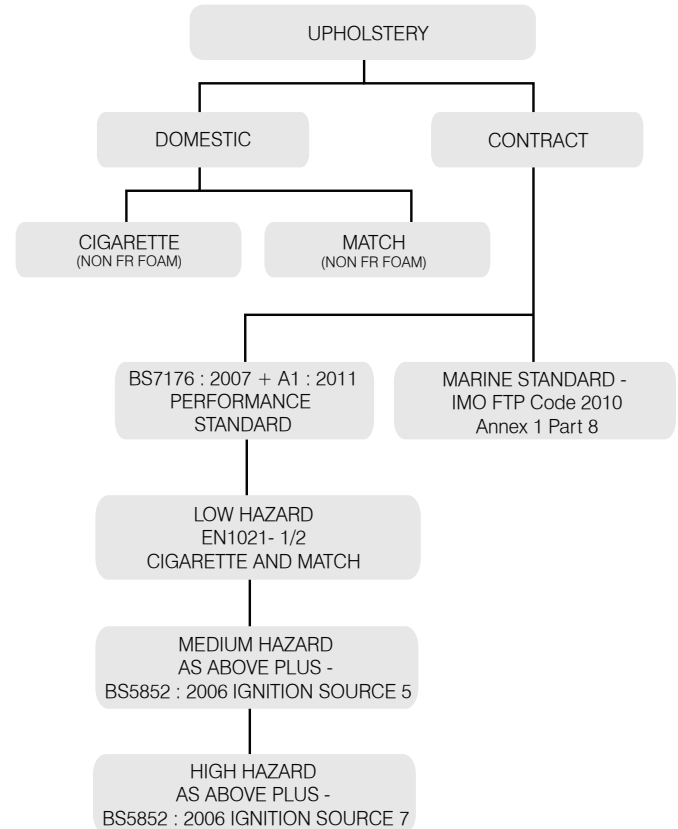
Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) with addition of Crib 5 (BS5852 : 2006) source
For Hotels, Public Buildings and Healthcare environments

| Performance Standard BS7176 – HIGH HAZARD

Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) with addition of Crib 7 (BS5852) : 2006 sources
For Prisons, some Hospitals and offshore installations

| Marine Standard - IMO FTP Code 2010 Annex 1 Part 8

Test standard for Marine use including a propane flame application of 20 seconds over Non-FR foam



| USA FR - UPHOLSTERY

| NFPA 260

This is the national flame retardancy standard tested to Cigarette and Match ignition sources.

Some regulations are left to local fire officers/building code officials

| CAL TB 117

Test specimens are mounted at 45° and exposed to flame application for 1 second

Pass : No ignition
Virtually all upholstery fabrics pass

| CAL TB 116

Tested to cigarette ignition and carried out on complete units

| CAL TB 133

Tested on complete unit for items in high risk occupancies
i.e non-domestic

| USA FR - CURTAINS

| NFPA 701

This is the national standard for flame retardancy for drapery

Pass : No after flame/droplets after 2 seconds.
No weight loss more than 40%

| POSITIVES & NEGATIVES

All fabrics have positive and negative characteristics. Sometimes, properties that appear negative are not important because they are not required for a particular end use. Correct Specification of a fabric is crucial to avoid unsatisfactory performance. Listed below are some of the main attributes of FR inherent and FR treated fabrics.

| INHERENTLY FR POLYESTER FABRICS Such As Trevira CS



| Positives

- A large number of fabric weights and constructions available offering many possible applications
- Inherently FR with no additional chemical treatments
- Enduring and permanent with no aggressive chemicals
- Very low emission of fumes
- Recyclable and environmentally friendly
- Very strong relative to weight
- Easy Care
- Durable to washing at high temperatures
- Can be recycled

| Negatives

- The fabric can pill if not manufactured correctly
- Will not form a char barrier during FR testing

| FR BACKCOATED FABRICS For Upholstery or Blackout Curtains

| Positives

- Can be easily applied
- Can be applied to a large number of fabric qualities
- Face appearance is unaffected by the backcoating process
- Creates 'blackout' when applied to curtains

| Negatives

- Not all fabrics are suitable for backcoating
- Does not guarantee flame retardancy of all fabric blends
- Not always durable to washing

| WOOL FABRICS

| Positives

- Natural and sustainable
- Strong relative to weight
- Strong durability
- Acts as a char barrier during FR testing

| Negatives

- Not inherently FR to all requirements
- Can pill depending upon processing
- Fewer fabric constructions available
- Generally and comparably expensive
- Not easy care

| SEMI PERMANENT FR FINISHES

Typically treated with chemicals

| **Positives**

- Can be easily applied
- Can be added during dyeing or finishing process
- Offers some durability to washes

| **Negatives**

- Durability not permanent
- FR will dissipate after time particularly after repeated laundering and abrasion

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Should you require any more information on Panaz products please contact: admin@panaz.co.uk or visit: www.panaz.com



As a specialist contract fabric producer, Panaz is dedicated to design excellence with exceptional product performance. All of our fabrics are put through a rigorous test criteria before release, to ensure or exceed the appropriate levels of flame retardancy and durability. Our continual commitment to innovation gives a constant flow of new designs, colours and constructions and a diverse range of exclusive and beautiful fabrics.



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