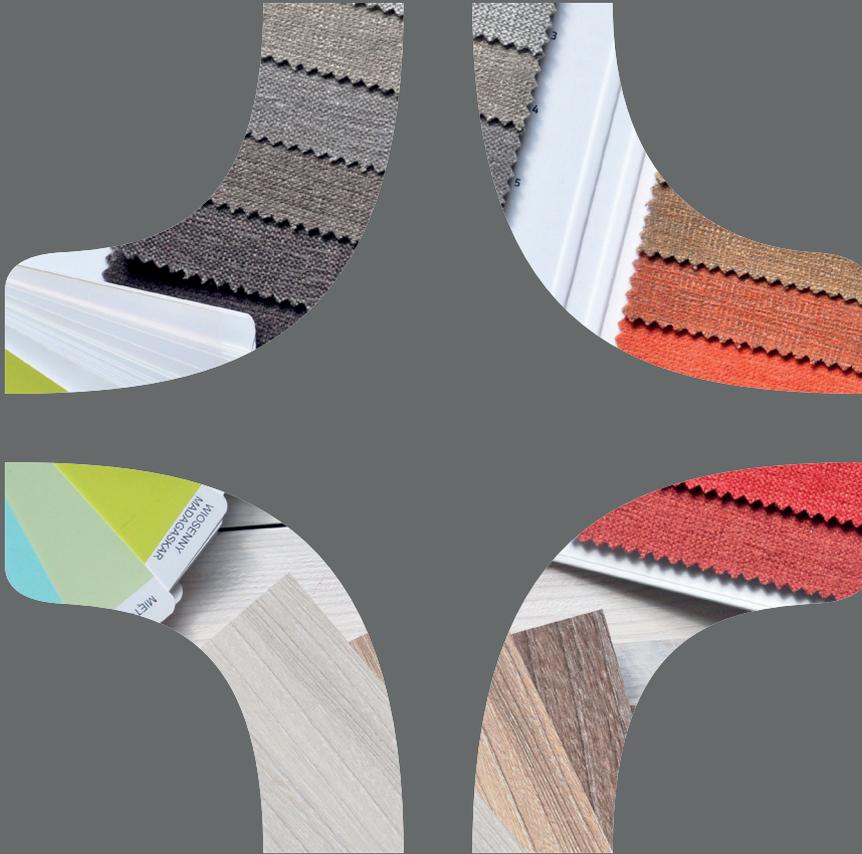




Bridge



Reference Guide to
Flame Retardancy of
Contract Furnishings

www.bridgecontractinteriors.com

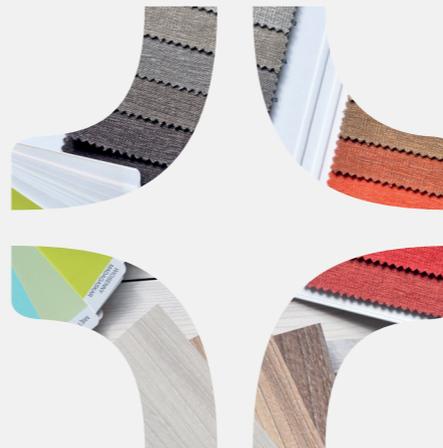


As a specialist contract furnishings producer, Bridge Contract Interiors is dedicated to design excellence with exceptional product performance. All of the fabrics we use are put through a rigorous test criteria before release, to ensure or exceed the appropriate levels of flame retardancy and durability.

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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.

*Regulation Reform (Fire Safety) Order 2005

** Fire (Scotland) Act 2005

Source of Data w www.opsi.gov.uk and w 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 Harmonised European Standard

- Edge ignition test with Radiant heat source applied to the fabric test piece

Marine Standard: IMO A.471 (Xii)/A.563 (14)

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



BED BASES & MATTRESSES

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 For Bed Covers and Bedthrows

- Cigarette, Match and Crib ignition sources are used to satisfy the safety level based on a risk assessment

Marine Standard IMO A.688 (17)

- 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

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

BS7177 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 cigarette and match test. The cigarette test may be conducted over any grade of foam while the match 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

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

Performance Standard BS7176 – LOW HAZARD

- Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) sources
- For Domestic Use

Performance Standard BS7176 – MEDIUM HAZARD

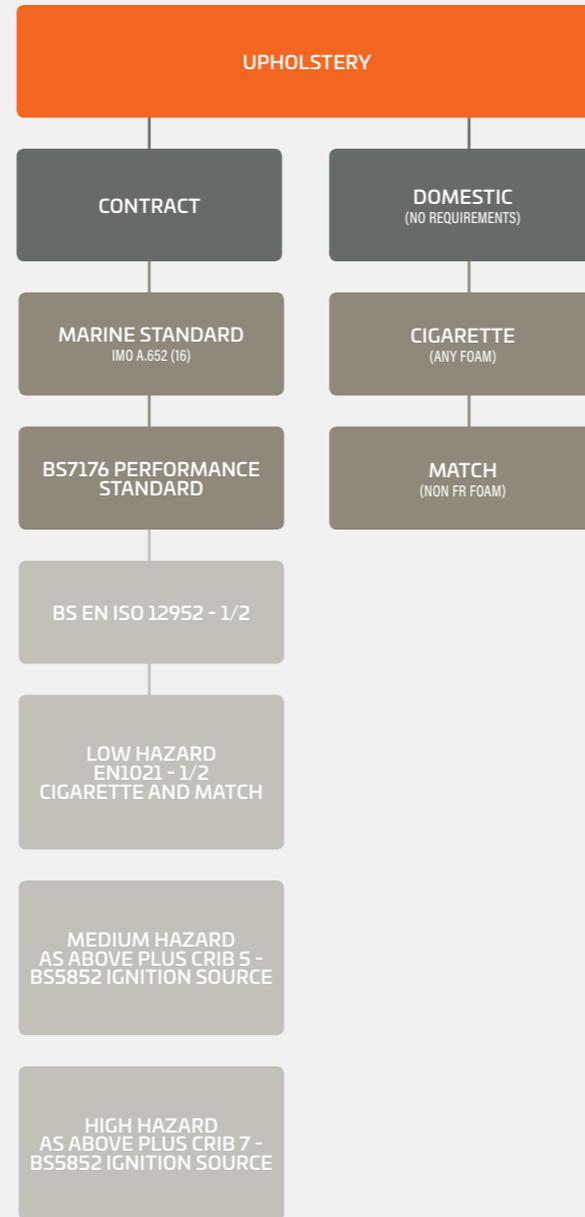
- Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) and Crib 5 (BS5852) sources
- For Hotels, Public Buildings and Healthcare environments

Performance Standard BS7176 – HIGH HAZARD

- Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) sources and Crib 7 (BS5852) sources
- For Prisons and some Hospitals

Marine Standard - IMO A.652(16)

- Test standard for Marine use including a flame application of 20 seconds over CMHR foam



UPHOLSTERY & HEADBOARDS

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

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

NEGATIVES

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

FR TREATED COTTON FABRICS

POSITIVES

- FR treatments can be easily applied by a pad and baking process and applicable to all cellulose fabrics including viscose
- Acts as a char barrier during FR testing
- Natural and sustainable

NEGATIVES

- Can be stiffer with lower drape characteristics
- Can cause skin irritation in certain circumstances
- Additional chemical treatments mean additional cost
- High emission of fumes
- Additional chemical application can reduce tensile strength
- Fabric can be susceptible to additional shrinkage when washed

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

MODACRYLIC BLENDED FABRICS

POSITIVES

- Good handle, natural feel
- Inherently flame retardant with no additional chemical treatments
- Acts as a char barrier during FR testing

NEGATIVES

- Limited yarns and yarn count availability
- Less durability, Modacrylic can be susceptible to pilling dependent upon fibre percentage
- Fabric can be susceptible to additional shrinkage when washed

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



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