

Global Guide to **Flame Retardancy**

Contract Fabric Experts
Global Guide to Flame Retardancy



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Gallante Upholstery with halogen free FR backcoating



Who is this guide for?

From October 2006 all non-domestic premises in England*, Wales* and Scotland** were required to comply with a new fire safety order.

This guide is intended as a quick reference for A&D, Procurement and End Users on 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 for upholstery and soft furnishings fabrics.

Failure to meet the requirements of these regulations could lead to prosecution, which leads to hefty fines or conviction. This order replaced the previous fire legislation and any fire certificates issued under the Fire Precautions Act 1971 ceased to have effect.

* Regulation Reform (Fire Safety) Order 2005

** Fire (Scotland) Act 2005

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



Making the safest choice

Hospitality, Workplace, Marine and Healthcare industries in particular have extremely tight regulations around fire retardancy — and with good reason.

In contract environments every single piece of fabric must comply with FR requirements based on its use and location.

Every Fabric that Panaz sell is Contract FR

Panaz doesn't just supply flame retardant fabric because we have to, but also because we believe it's the right thing to do. We're passionate about the subject and are dedicated to raising awareness, while also developing new technologies to increase safety.

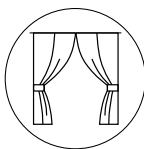
As a company, we were the first to introduce inherently flame retardant Trevira CS yarns to our industry, creating safer fabrics that prevent the spread of fire without the need for additional finishes, ensuring no impact on the aesthetic or textural qualities of the fabric, or the environment.

In addition, we've sponsored fire retardancy seminars that included an eminent panel of former firefighters and people involved in the Grenfell Tower review.

We believe in safety.

British FR requirements for -

Drapery



Contract

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

Hotels, Public Buildings and Offices

BS5867 Part 2 Type B

Test location: Face Ignition test.
Test type: Flame applied for 15 secs. Flame does not reach any edge of fabric test piece and no flaming debris from fabric test piece.

UK Hospitals, Healthcare Environments

BS5867 Part 2 Type C

Test location: Face and Back Ignition test
Test type: Flame applied for a range of application times.
Wash requirements: 50 washes for FR treated fabrics. Any resultant afterflame must cease within 2.5 secs.

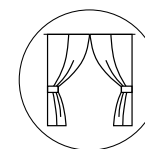
Harmonised European Standard

BS EN 13773

Where required: Europe only.
Test location: Edge ignition test.
Test type: Radiant heat source applied to the fabric test piece. Test is combination of EN1101 and EN13772

European Specific FR requirements for -

Drapery



Contract

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

France and Germany

M1 France

Test type: Known as electric burner tested to NFP95 and graded M1-M4 measuring afterflame droplets and rate of flame.

B1 Germany

Test type: Tested to DIN4102 and is a vertical test with addition of air supply and measures smoke gas temperature.

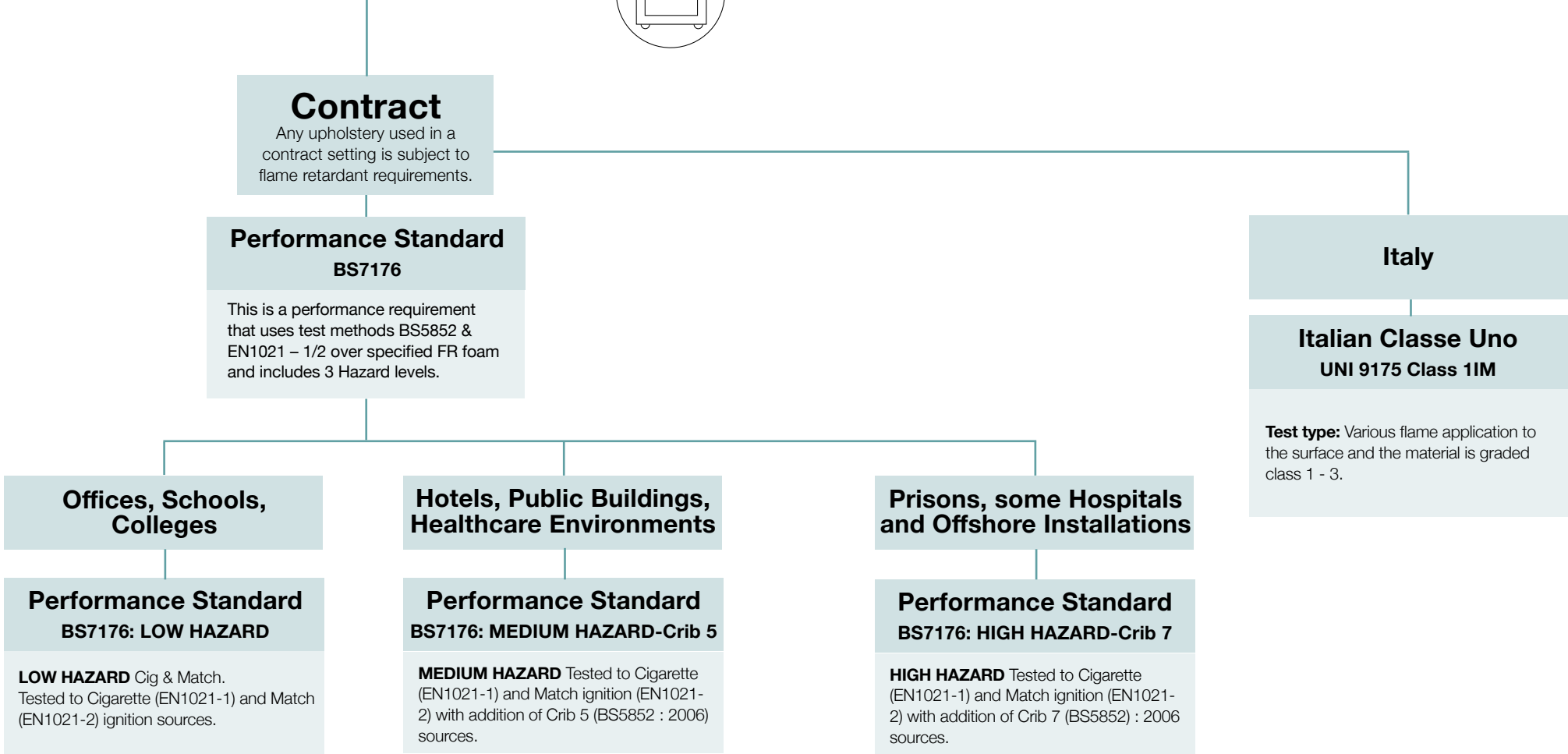
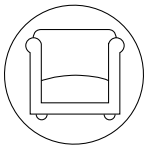
Italy

Italian Classe Uno UNI 9177

Test type: Vertical test measuring flame spread then graded class 1-3. Italian Ministry create further Omologation Certificate.

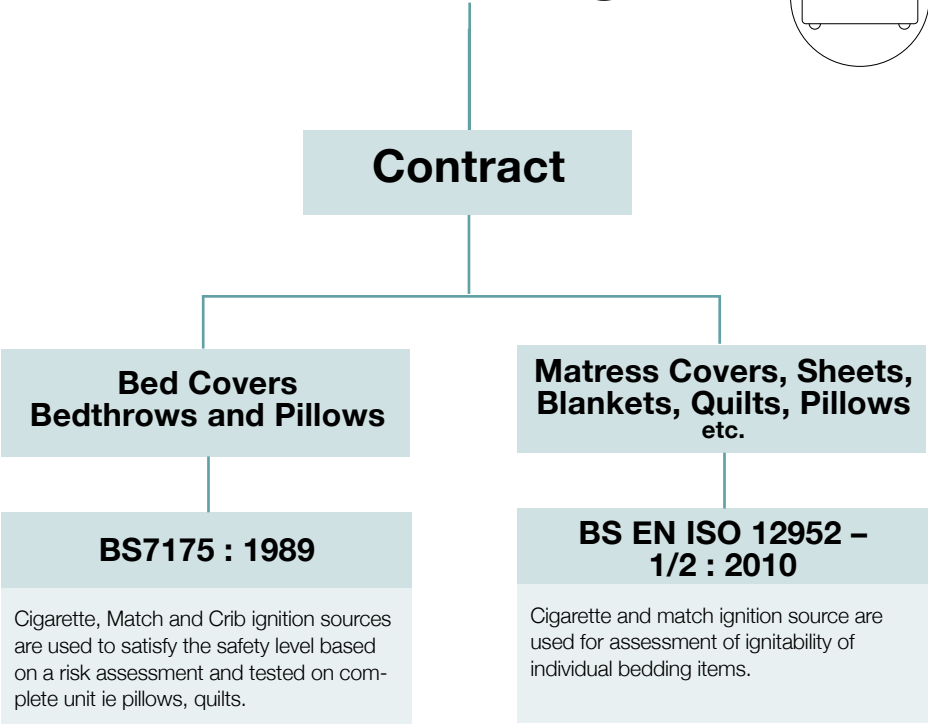
British & European FR requirements for -

Upholstery



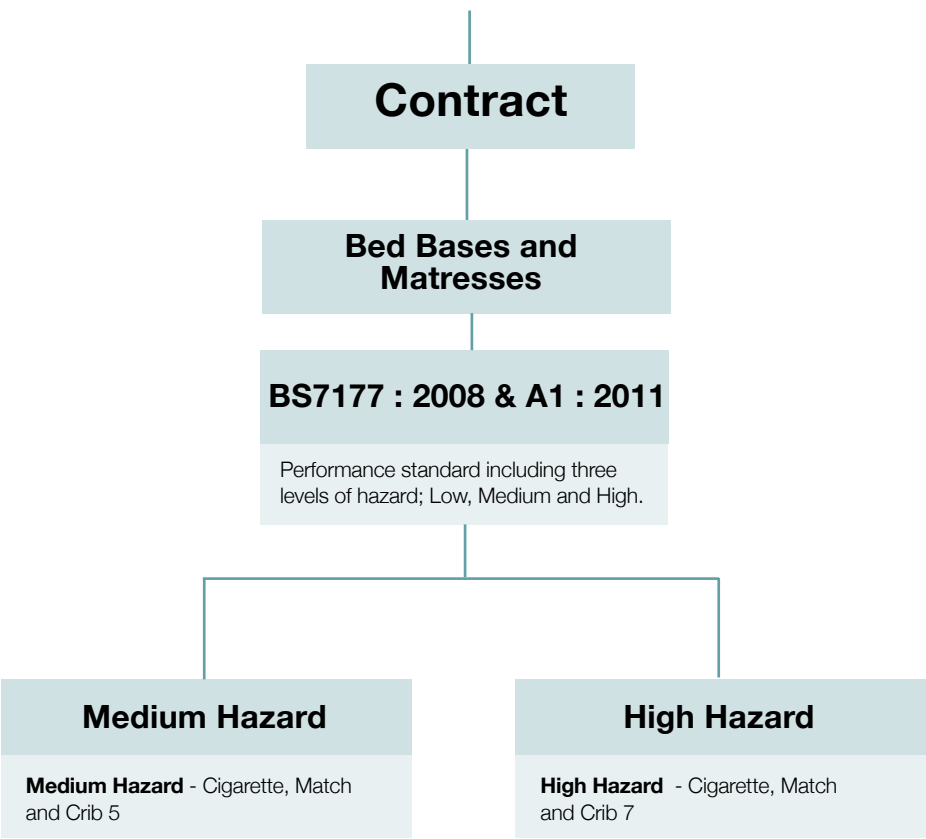
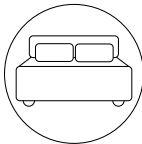
British & European FR requirements for -

Bedding



British & European FR requirements for -

Bed Bases & Mattresses

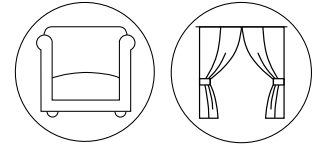




Astral with FR blackout coating

USA FR requirements for -

USA



Contract

Upholstery

NFPA 260

Tested to Cigarette and Match ignition sources. Some regulations are left to local fire officers/building code officials.

CAL TB 117

This is the national flame retardance standard, with Proposition 65 Regulations. Test specimens are mounted at 45° and exposed to flame application for 1 second. No ignition Virtually all upholstery fabrics pass.

Drapery

NFPA 701

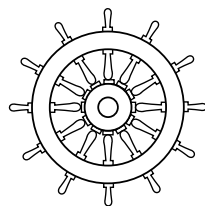
This is the national standard for flame retardancy for drapery.
Pass : No after flame/droplets after 2 seconds. No weight loss more than 40%

CAL TB Title 19

California Fire Marshall Title 19 used for the state of California and often utilized outside of the state. Title 19 is a vertical test for drapery and tents. The testing lab has to be approved by CSFM (California State Fire Marshall)

MED

The Wheelmark



The Marine Equipment Directive (MED), enacted by the European Parliament, is a wide range of quality controls to provide guarantees around the safety of products on board ships.

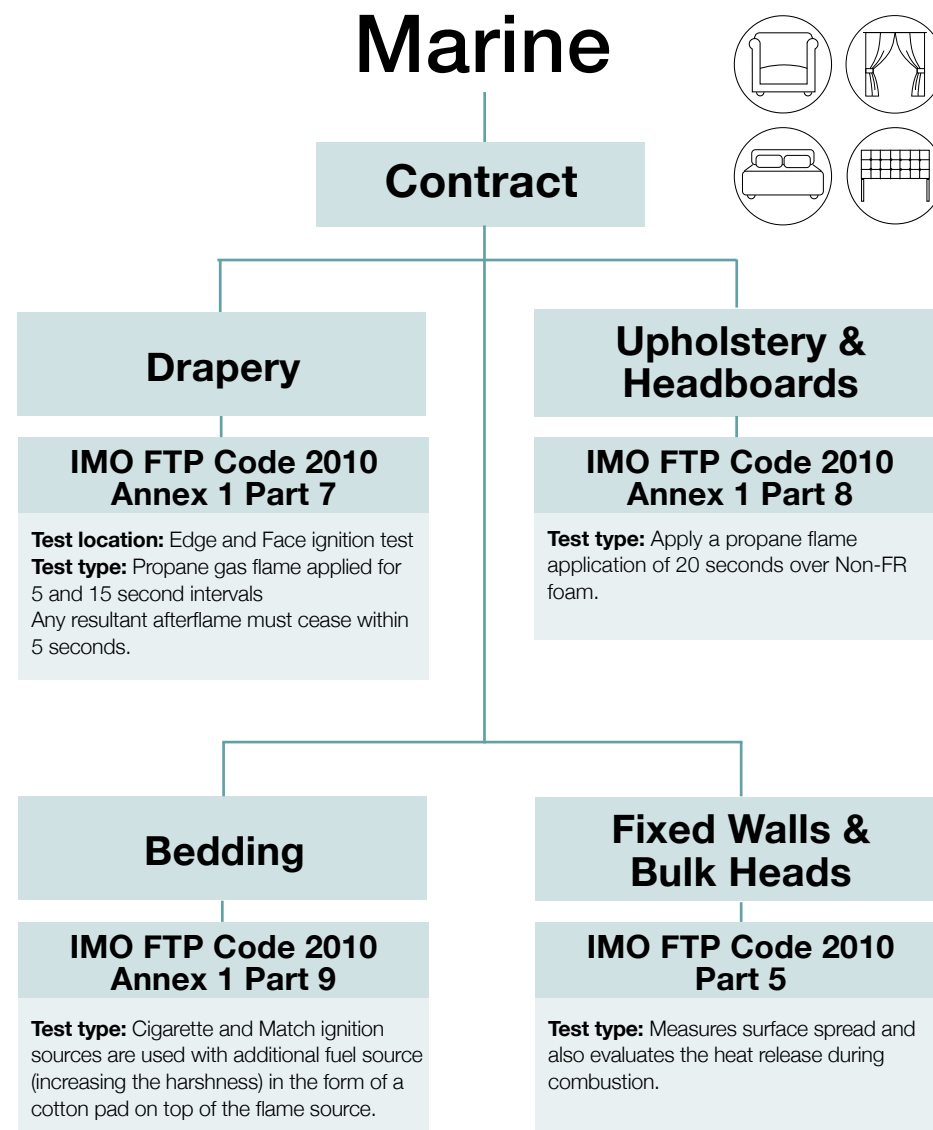
Meeting this directive is essential for products placed on EU flagged vessels, and there are reciprocal agreements in place with **the US Coast Guard – who will also accept the MED's quality mark.**

When you see the Wheelmark – as you will on a wide range of our products – it means that both the product and the manufacturer have undergone an extensive range of quality control inspections by an external agency. This doesn't just cover the IMO fire certificate, it covers production methods, internal quality control, technical specifications of each product, and globally is the most stringent inspection of materials being placed on ships.

The Wheelmark is awarded if you pass all aspects of the inspection. Products are awarded a Module B certificate and we – as the manufacturer – are awarded a Module D certificate.

Panaz are one of the few global textile providers to undergo this level of external inspection, and therefore can offer the Wheelmark. We take pride in placing the safety of lives at sea and quality control at the very heart of everything we do in this sector.

FR requirements for -



FR application types

There are 4 main types of applying FR to fabrics

Inherent

Back Coating

Lamination

Semi-Permanent



Freya collection FR backcoated upholstery fabric

Inherent

How

FR added during yarn manufacture.
Each yarn is fully enveloped prior to weaving / knitting.

Attributes

- Sustainable - no added chemical treatments
- Enduring and permanent
- Variety of fabric weights and constructions available
- Increased yarn strength
- Durable to washing
- Melts and shrinks away from the flame
- Recyclable and eco friendly
- Easy Care

Drawbacks

Can pill if not manufactured correctly



Trevira CS melts away from the flame
absorbing ignition energy



Astaire and Zena from the Novello Collection - woven from inherent Trevira CS yarns.

Back Coating

How

Liquid coating applied to the rear-side of the fabric creating a barrier to the flame, reduces the **Oxygen** and **Heat** available.

Attributes

Can be used on numerous fabric qualities
Reduces risk of splitting open
Invisible on fixed upholstery Creates Blackout

Drawbacks

Can affect handle and appearance on thin fabrics
Limited on drapery
Generally not washable
Must be tested for each fabric treated at UKAS labs



Harvard Upholstery with FR Backcoating.

Lamination

How

An additional layer is added, permanently via **heat, pressure and adhesives**.

Attributes

- Usually halogen free as this is better for the environment
- Brings added strength
- Invisible on fixed upholstery
- More consistent processing

Drawbacks

- Can affect handle and appearance on thin fabrics
- Can become rigid
- Higher cost than coating
- Retains air pockets



Rhythm from the Underground collection printed on Laminated EcoTwill.

Semi-Permanent

How

Fabric is dipped in liquid FR solution.

Attributes

Entire fabric is treated

Offers some durability to washing / laundering

Drawbacks

Durability is not permanent

FR will dissipate over time, particularly if laundered

Treatment is invisible so its not possible to visually assess when the treatment is no longer effective

Unable to determine the success of each application

Can rub off on skin contact

We are specialists in FR contract fabric.

For more than three decades, we have been making it easier for our customers to select safer and more flame retardant textiles, without compromising the look and feel of the fabrics.

Embracing technological advancements has kept us at the forefront of fire safety in contract textiles, with a proven history of pioneering innovation to improve our processes.

For these reasons we do not produce Semi-Permanent FR fabrics.



Parisienne Velvet Upholstery with FR back coating



Dreamscape laminated FR blackout



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