


# Global Guide to **Flame** **Retardancy** 2025

The lower half of the cover features a vibrant, abstract background of blue and purple flame-like patterns. These patterns are fluid and dynamic, with bright highlights and deep shadows, creating a sense of movement and intensity. The colors range from deep indigo to bright, almost white-blue highlights, giving the impression of fire or smoke captured in a stylized, artistic manner.

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# 04 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.

## Compliance

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.

## Quick Reference

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.



\* Regulation Reform (Fire Safety) Order 2005

\*\* Fire (Scotland) Act 2005

Source of Data [www.opsi.gov.uk](http://www.opsi.gov.uk) and [www.communities.gov.uk](http://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 it's 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.

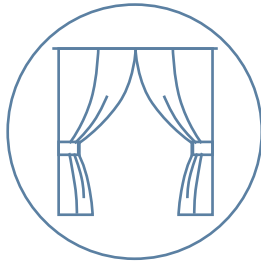
**We believe in safety.**

06

# UK & European FR Requirements Drapery

## Contract

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



## France

### M1 France

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



## UK 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



## Germany

### B1 Germany

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



## Italy

### 1IM UNI 9175 (Italy)

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





# 08

## UK & European FR Requirements Upholstery

### Contract

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



#### Offices, Schools, Colleges

##### **BS7176: Low Hazard**

Cig & Match. Tested to Cigarette (EN1021-1) and Match (EN1021-2) ignition sources.

#### Hotels, Public Buildings, Healthcare Environments

##### **BS7176: Medium Hazard-Crib 5**

Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) with addition of Crib 5 (BS5852 : 2006) sources.

#### Prisons, some Hospitals and Offshore Installations

##### **BS7176: High Hazard-Crib 7**

Tested to Cigarette (EN1021-1) and Match ignition (EN1021-2) with addition of Crib 7 (BS5852) : 2006 sources

### Performance Standard

#### **BS7176**

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

### Italy

#### **1IM UNI 9175 Class (Italy)**

**Test type:** Various flame application to the surface and the material is graded class 1 - 3



# 10 UK & European FR Requirements Bedding, Bed Bases & Mattresses

Contract



Bedding

Bed Covers,  
Bedthrows and Pillows

**BS7175 : 1989**

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 and quilts.

Contract



Bed Bases & Mattresses



Mattress Covers, Sheets,  
Blankets, Quilts,  
Pillows etc.

**BS EN ISO 12952 – 1/2 : 2010**

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



Bed Bases & Mattresses

**\* BS7177 : 2008 & A1 : 2011**

Performance standard including three levels of hazard; Low, Medium and High.

**Medium Hazard** - Cigarette, Match and Crib 5.

**High Hazard** - Cigarette, Match and Crib 7.

\* Panaz does not test to this certification



# 12 USA FR Requirements

## Upholstery & Drapery

Contract



Bedding

Upholstery

**NFPA 260**

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

Contract



Drapery

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%

Upholstery

**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.



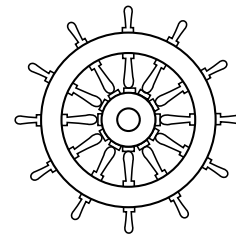
Drapery

**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)



# 14 The Wheelmark MED



**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.

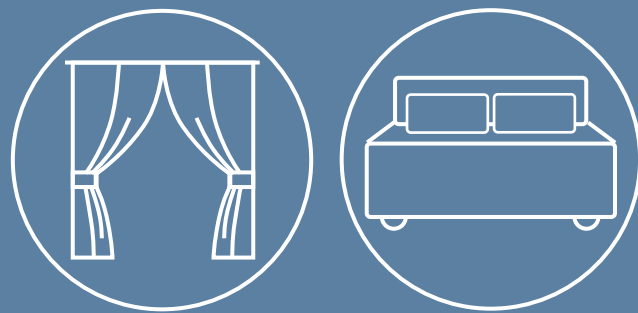
The Wheelmark is awarded if you pass all aspects of the inspection. Products are awarded a Module B certificate and we – as the manufacturer – are awarded a Module D certificate.

**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.**



# 16 FR Requirements for Marine

## Contract



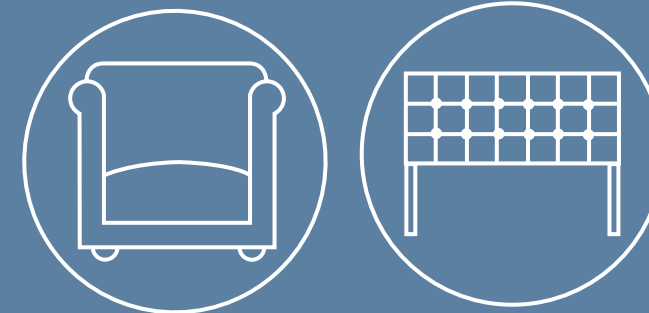
### Drapery & Bedding

## Drapery

### IMO FTP Code 2010 Annex 1 Part 7

**Test location:** Edge and Face ignition test  
**Test Type:** Propane gas flame applied for 5 and 15 second intervals  
**Pass:** Any resultant afterflame must cease within 5 seconds.

## Contract



### Upholstery & Headboards Fixed Walls & Bulk Heads

## Upholstery & Headboards

### IMO FTP Code 2010 Annex 1 Part 8

**Test Type:** Apply a propane flame application of 20 seconds over Non-FR foam.

## Bedding

### IMO FTP Code 2010 Annex 1 Part 9

**Test Type:** 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.



## Fixed Walls & Bulk Heads

### IMO FTP Code 2010 Part 5

**Test Type:** Measures surface spread and also evaluates the heat release during combustion.





# 18 FR Application Types

## Inherent

### How

FR added during yarn manufacture.  
Each yarn is fully enveloped prior to weaving / knitting. Adding Trevira CS yarn is an example of this.

### 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

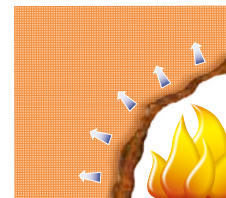
Recyclable and eco friendly

Easy Care

### Drawbacks

Can pill if not manufactured correctly.

## Trevira CS Yarns



Trevira CS melts away from the flame absorbing ignition energy



There are 4 main types of applying FR to fabrics.  
Inherent, Back Coating, Lamination, Semi-Permanent.

## 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.





# 20 FR Application Types

## Lamination

### How

FR added during yarn manufacture.  
Each yarn is fully enveloped prior to weaving /  
knitting. Adding Trevira CS yarns  
is an example of this.

### 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.



## 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.

Every Fabric that Panaz  
sell is Contract FR

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.

**We believe in safety.**





Parisiene Velvet Upholstery



Oban Blackout Curtain



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The bottom half of the page features a background of abstract, flowing, ethereal lines in shades of blue and purple, creating a sense of movement and depth. The lines are thin and wispy, resembling smoke or liquid in motion, set against a dark background.