



# MARINE FLOOR COVERINGS

creating better environments

forbo

FLOORING SYSTEMS





**COMMITTED  
TO THE HEALTH  
OF ONE**

[WWW.FORBO-FLOORING.COM/CHO](http://WWW.FORBO-FLOORING.COM/CHO)

As our floors are part of the indoor environment in which people live, meet and work, it is our mission to design and offer products that contribute in a positive way to the health and comfort of the individual. "Committed to the health of one" introduces a focus in our commitment to sustainability that centres around all aspects that concern your health, well-being and comfort in relation to our products and services, today as well as for future generations.

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## CREATING BETTER **MARINE** ENVIRONMENTS ACROSS THE WORLD

**Forbo understands that material choice is one of the most critical aspects of designing marine transport interiors.**

The material sets the tone for the overall look and feel of a vessel with many criteria influencing the specification including aesthetics, durability, maintenance and the requirement of IMO certification. Add to this other performance requirements such as slip resistance, sound absorption, comfort, anti-static properties, cleanability and green credentials and it becomes obvious why flooring choice is a complex one.

Forbo Flooring Systems manufactures the widest range of floor coverings in the market and offers a portfolio of IMO and non IMO certified products. Our Key Account Managers will help you, and provide all the expert advice you need when selecting

flooring for your marine projects. In addition to our core collections, we also offer a custom design service to help you create flooring designs that perfectly match your interior requirements.

We understand that aesthetics and corporate branding are of high importance, and that functionality and durability play an important role in defining different floor covering requirements.

### **Need to reduce the costs of cleaning?**

In all marine transport environments, having protective entrance systems such as Forbo's Coral Marine FR can help greatly. With a cut pile construction of 60% wool and 40% nylon, it stops up to 95% of walked in dirt and moisture, which significantly reduces cleaning costs and prolongs the lifetime of the interior floorcoverings. It also meets the IMO standards.

### **IMO certified products are:**

- **Flotex FR**  
(a unique flocked floorcovering)
- **Coral Marine FR**  
(a textile entrance system and corridor floor covering)
- **Westbond FR**  
(fusion bonded carpet tiles)
- **Forbo's own IMO certified primers and adhesives**

### **Non IMO products include:**

- **Linoleum** (Marmoleum)
- **Vinyl: Safety, Acoustic and LVT** (Step, Sarlon Traffic, Allura)
- **Carpet tiles** (Tessera)
- **Flocked** (Flotex)
- **Entrance systems** (Coral, Nuway)



# flotex® FR

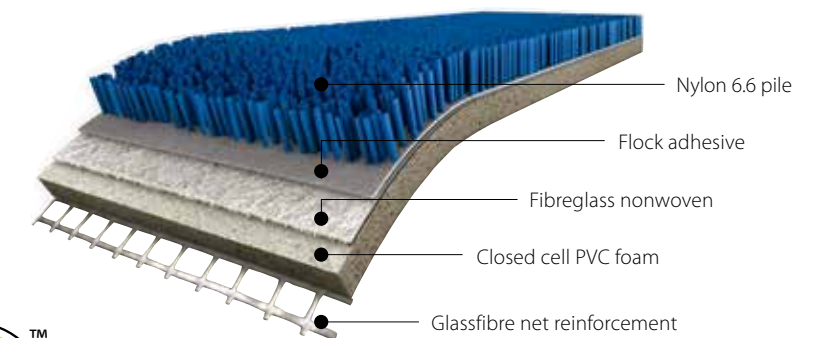
THE ONLY **IMO CERTIFIED,**  
**WASHABLE,** TEXTILE  
FLOOR COVERING

## flotex® FR

Flotex FR is unique, combining the cleaning properties and durability of a resilient flooring with the comfort, slip resistance and acoustic properties usually associated with textiles.

### Benefits:

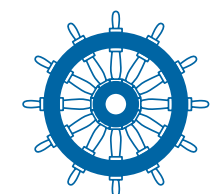
- Fully compliant to IMO Marine standards
- Smooth textile velour like surface that's comfortable and warm underfoot
- Excellent slip resistance
- 100% waterproof. Impervious backing makes it suitable for wet cleaning
- Durable construction: using Nylon 6.6
- Easy to clean
- Improved indoor air quality (independently proven by Allergy UK)
- Easy to repair any damaged areas
- Anti-microbial
- Flotex is phthalate free
- Excellent acoustic properties up to 22 dB
- Choose from an extensive range of designs and colours or use our custom design service
- High definition print offers you complete freedom of design.



Flotex FR is extremely dimensionally stable and has a velour-like surface whilst being functional and extremely easy to clean.

Having been awarded the prestigious Allergy UK Seal of Approval, Flotex FR is proven to offer consistent protection against bacteria and reduce allergens, improving indoor air quality for passengers.

Flotex FR can be digitally printed. Its high definition quality and specialist printing technology allow for large endless pattern repeats and vivid lifelike colours. This creates a new dimension for Flotex FR and provides ultimate design flexibility for marine environments.



IMO Certificate No. 164.117/1121/WCL MED0364



# flotex® vision FR

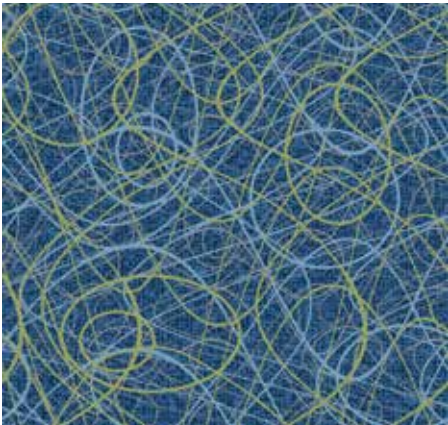
Flotex Vision FR offers an infinite number of design options ranging from abstracts with an intricate colour spectrum to realistic images of natural materials.

With over 500 items to choose from, Flotex Vision is best viewed on Forbo's online digital library which is continuously updated. The designs in Flotex Vision FR fall into six broad categories, each of which represents a different design direction: Floral, Lines, Shape, Pattern, Image and Naturals.



**Lines**

Line or stripe designs, each with their own characteristics, ranging from muted and sophisticated colourways to very complex and multi-colour patterns.



**Pattern**

Textured, non-directional visuals created through the intricate interplay of networks and patterns.



**Floral**

A selection of floral designs, ranging from abstract, graphic flower motifs to romantic images of roses and butterflies.



**Shape**

A collection of organic shapes and motifs delivering beautiful all-over patterns, including both contemporary and traditional designs.



**Naturals**

This collection offers photorealistic images of natural materials such as wood, stone, ceramics and cork floors. The design technology creates amazingly realistic aesthetics, with the added benefits of improved acoustics, slip resistance and reduced maintenance costs.



**Image**

A design category containing a wide variety of photographic images. Grass, sand, water drops, buttons and street maps are just some of the possibilities to be found within this intriguing range.

# TOTAL DESIGN FREEDOM

Flotex Vision FR is a collection of high definition digital print designs that create superior textures with almost 3D like appearance. As Flotex Vision FR has 70 million fibres per square per metre, it provides a matt high density substrate for printing, enabling vibrant designs and true-to-life visuals to be produced in high level photographic resolution, providing ultimate design flexibility for marine interiors. All colours, tones and hues are achievable with Flotex Vision FR.



All of the Flotex Vision designs offer the option to create your own colourway, allowing you to match the floor precisely to your interior design scheme or corporate identity colours. If you have your own vision of what you want on the floor, we also offer a complete custom design service on request.



[www.flotexvision.com](http://www.flotexvision.com)





# flotex® colour FR

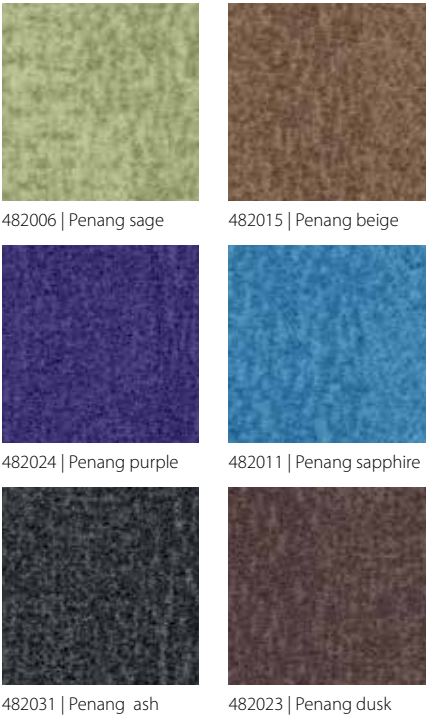
Flotex Colour is a collection of three designs (Metro, Penang and Calgary) which together form a rhapsody of colour across a broad spectrum.

The swatches shown are only a small selection of the colourways available. Please refer to the Forbo Flooring website in order to see the full colour palette.

## flotex® colour FR metro



## flotex® colour FR penang



## flotex® colour FR calgary



# TECHNICAL SPECIFICATIONS

### Technical specifications

Flotex FR meets the requirements of EN 1307

	Total thickness	ISO 1765	Approx. 3.3 mm
	Wear classification	EN 1307	Class 33
	Roll width		200 cm
	Roll length		30 m
	Suitability for castor chairs	EN 985	Castor chair continuous use
Colour fastness ratings:			
	Light	EN ISO 105/B02	6
	Rubbing	EN ISO 105/X12	≥ 4
	Water	EN ISO 105/E01	≥ 4
	Pile material		100% polyamide
	Construction		Flocked textile floor covering
	Backing		Resilient waterproof backing
	Total weight	ISO 8543	Approx. 1225 gram/m²
	Pile thickness	ISO 1766	Approx. 2 mm
	Pile installation weight	ISO 8543	Approx. 250 gram/m²
	Impact sound insulation	EN ISO 717-2	Δ Lw = approx. 22 dB
	Dimensional stability	ISO 2551	≤ 0.20%
	Flexibility	ISO 24344	No cracking (10 mm diameter Mandrel)
	Electrical resistance	ISO 10965	Approx. 10 <sup>9</sup> Ω
	Comfort class	EN 1307	LC1



Flotex FR product meets the demands set by EN 14041



Slip resistance EN 13893 > 0.30



Body voltage ISO 6356 < 2.0 kV

Fire rating:

IMO Resolution A653(16)	Pass
IMO Resolution MSC 307(88) Annex 1 Part 2	Pass
IMO Resolution MSC 307(88) Annex 1 Part 5	Pass
US Coast Guard approval ref: 164.117/1121/WCL	MED0364

Flotex FR is made to order.  
IMO certified adhesives can be recommended upon request.  
Final production might vary within commercial tolerances from sample.  
Manufacturing specifications subject to normal industry tolerances.  
Forbo reserves the right to improve the specification of its products without giving prior notice.  
Errors and omissions excepted.



IMO Certificate No. 164.117/1121/WCL MED0364



# coral<sup>®</sup> marine FR

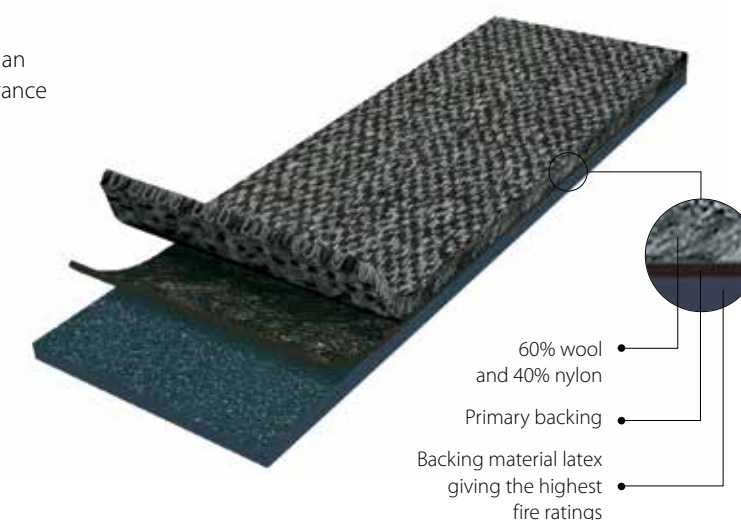
## TEXTILE ENTRANCE AND CORRIDOR FLOOR COVERINGS

## coral<sup>®</sup> marine FR

Coral is the market leader in entrance systems providing an exceptionally versatile and proven range of 'clean-off' entrance system products and customisable carpets.

### Benefits:

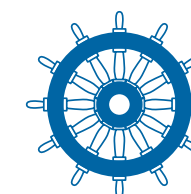
- Fully compliant to IMO Marine standards
- Stops up to 95% of walked in dirt and moisture
- High moisture absorption
- Excellent dirt storage/soil hiding
- Durable construction: using a 60% wool/40% nylon mix
- PVC and phthalate free
- Advanced colouring and choice
- All references stocked for quick delivery
- Using Coral Marine FR can reduce cleaning costs and prolong the lifetime of on board floor finishes and coverings.



Coral Marine FR is a cut pile floor covering consisting of 60% wool and 40% nylon. It is the ideal choice for an entrance system, simultaneously absorbing moisture and removing dry soiling. Coral entrance systems can reduce cleaning costs and prolong the life of on-board floor finishes and coverings.

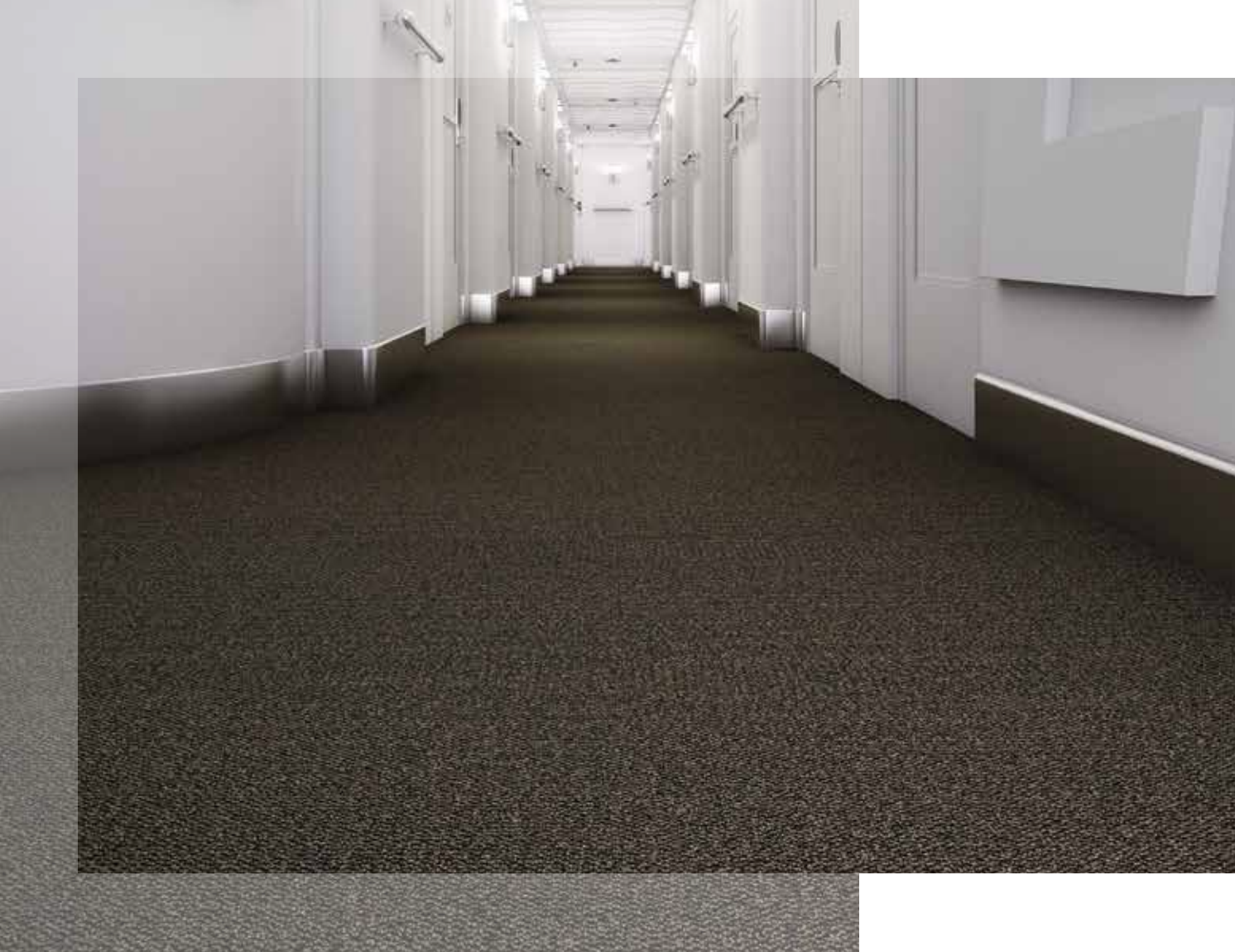
Coral Marine FR meets all the fire safety standards set by the International Maritime Organization (IMO) for products used in seagoing vessels. Yarn and backing systems have been developed to meet the stringent smoke toxicity and low flame spread standards required to achieve the IMO 'Wheelmark'.

As a result Coral Marine FR can be used with confidence in cruise liners, passenger ferries, charter boats and other seagoing vessels, in addition to offshore facilities where the 'Wheelmark' classification is required.



IMO Certificate No. 164.117EC0493/MED0493/17





4210 | Rotterdam black



4201 | Singapore grey



4230 | New York black



4207 | Panama blue



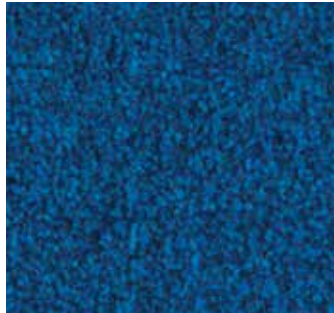
4223 | Hong Kong red



4204 | Santos brown














4226 | Tangier brown



4222 | Sidney blue

# TECHNICAL SPECIFICATIONS

## Technical specifications

	Total thickness	ISO 1765	Approx. 9 mm						
	Area of use		Heavy use						
	Roll width		185 cm						
	Roll length		Roll length approx 27.5 m (customisable)						
	Colour fastness ratings:								
	Light	EN ISO 105/B02	> 5						
	Rubbing	EN ISO 105/X12	4						
	Water	EN ISO 105/E01	4-5						
	Seawater	EN ISO 105/E02	4						
	Shampoo	BS 1006	4-5						
	Organic solvents	EN ISO 105/X05	5						
	Construction		Tufted, 5/32" cut-pile						
	Designs		Mottled						
	Pile material		60% Wool / 40% polyamide						
	Tuft base		Non-woven polyester						
	Backing		FR latex						
	Total weight	ISO 8543	Approx. 2550 gram/m <sup>2</sup>						
	Pile installation weight	ISO 8543	Approx. 1120 gram/m <sup>2</sup>						
	Pile thickness	ISO 1766	Approx. 6 mm						
	Pile density	ISO 8543	0.141 gram/cm <sup>3</sup>						
	Number of tufts	ISO 1763	Approx. 96,400/m <sup>2</sup>						
	Impact noise reduction	EN ISO 717-2	Δ Lw 31dB						
	Sound absorption	EN ISO 354:2003	f(Hz):	125	250	500	1000	2000	4000
			αp:	0.05	0.05	0.1	0.3	0.55	0.6
	Slip resistance	EN 13893	DS						
	Body voltage	ISO 6356	< 2.0 kV antistatic						
	Thermal resistance	ISO 8302	0.125 m <sup>2</sup> K/W						
	Fire rating:								
	IMO Resolution A653(16)		Pass						
	IMO Resolution MSC 307(88) Annex 1 Parts 2 and 5		Pass						
	US Coast Guard approval ref: 164.117EC0493		EC0493/17						

IMO certified adhesives can be recommended upon request.

Final production might vary within commercial tolerances from sample.

Manufacturing specifications subject to normal industry tolerances.

Forbo reserves the right to improve the specification of its products without giving prior notice.

Errors and omissions excepted.



IMO Certificate No. 164.117EC0493/MED0493/17





# westbond® FR

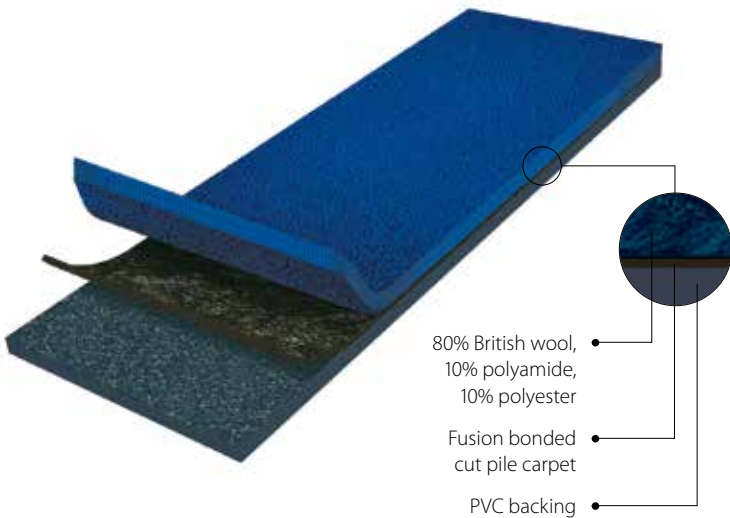
**INFINITE** POSSIBILITIES  
AND **EXCEPTIONAL**  
QUALITY

## westbond® FR

The Westbond wool carpet tile range is synonymous with sophistication and offers great warmth, comfort and acoustic benefits. Westbond FR carpet tiles are IMO certified and are ideally suited to many environments including cabins, restaurants, offices and lounge areas.

**Benefits:**

- Fully compliant with IMO Marine standards
- 50cm x 50cm tile format for easy installation and replacement
- Design flexibility to suit all interior design schemes – available in 144 colours
- Create a unique look and feel with custom colours and designs
- Offers warmth and underfoot comfort.



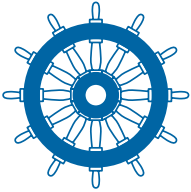
Fusion bonding is a sophisticated method of carpet tile manufacture where individual yarn pile is bonded onto the backing material to make an extremely dense and luxurious carpet tile. Each tuft is individual and a high proportion of the yarn is in the wear surface providing a beautiful, rich, velour carpet tile which gives an excellent broadloom appearance.

**Choose your own colours and combine them into a truly unique floor**

Westbond allows customers to take control of the process of designing luxurious, custom carpet tiles with a heavy pile weight for the most prestigious installations.

Create your own carpet tile with a flex combination. The Flex carpet tile is unique to Westbond and offers the ideal solution for those seeking an individual look to the floor. Simply create your own carpet tile design by selecting colours from the Westbond FR range in a flex combination.

The results of your creativity can be easily and quickly realised with a sample to show you what the finished product will look like, dispatched within 24 hours.



IMO Certificate No. 164.117/EC0338/53106



# westbond® FR

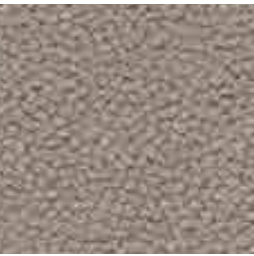
Westbond is available in 144 colours that can be flexed together to create unique designs.



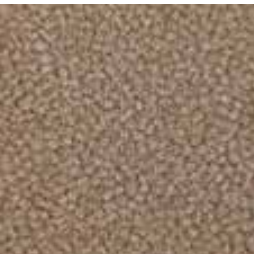
W15856FR | marshmallow



WF152192FR | sorbet



W1510078FR | tendril



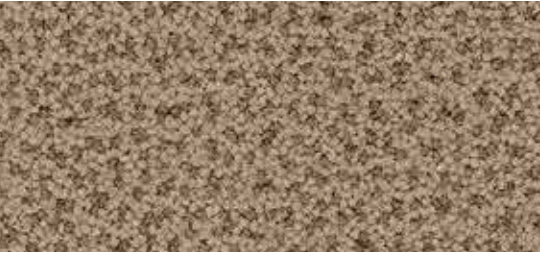
W15734FR | fawn



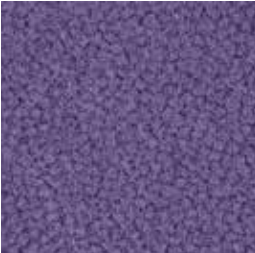
W15569FR | coral



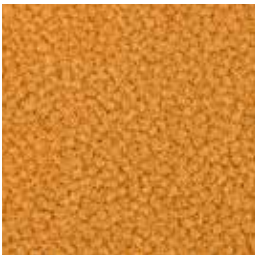
W15248FR | sunset gold



WF152196FR | wheatgrass



W15419FR | violet



W15226FR | tiger



W15410FR | cerise\*



WF152187FR | morello



W15425FR | royal\*



W15568FR | flamenco



WF152199FR | sunhaze



W15578FR | poppy



W15442FR | acorn



W15415FR | bilberry



W15405FR | brick dust

*\*Stocked items.*

We offer 10 stocked designs, marked below with an asterisk.

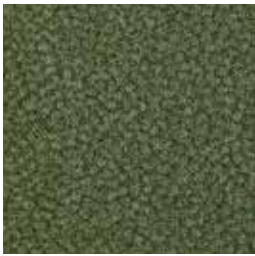
Below is only a selection of the colours available, for further information on the full range, please contact us.



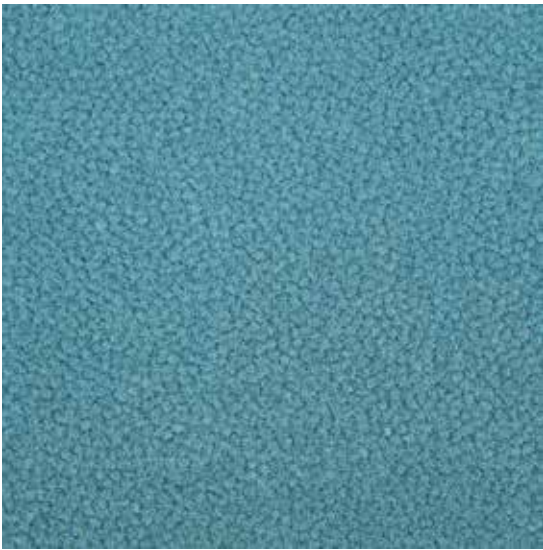
W1510075FR | lemongrass



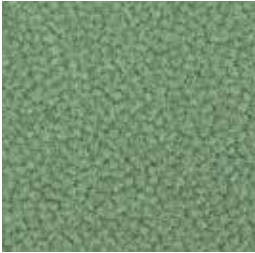
WF152198FR | gooseberry



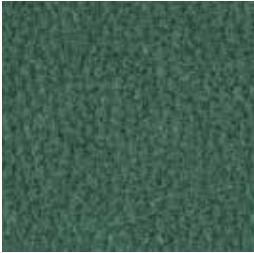
W15433FR | lichen



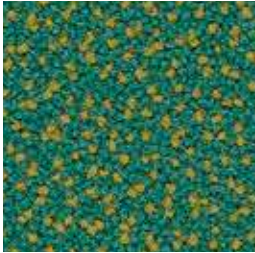
W15579FR | ocean



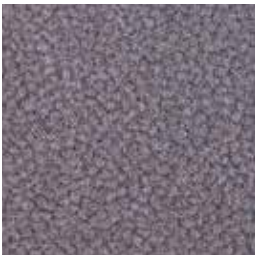
W15429FR | linden



W15431FR | pine frost



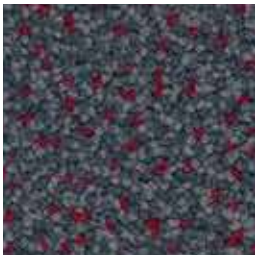
WF152194FR | amazon



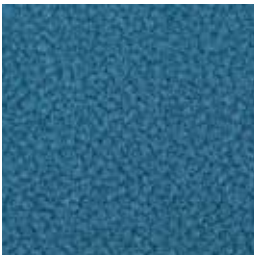
W15489FR | battleship\*



WF152193FR | hailstone



WF1521564FR | shooting star\*



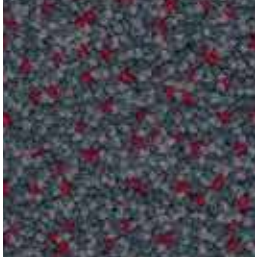
W15585FR | crystal



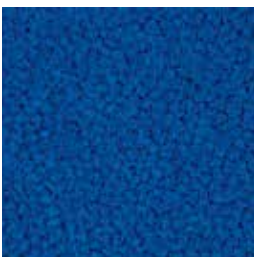
WF1521566FR | sea mist\*



W1510076FR | sparrow



W15490FR | gunmetal\*



W15421FR | bluebird\*



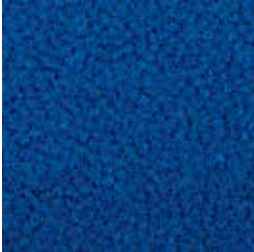
WF1521565FR | night sky\*



WF152185FR | blackbird



W15017FR | charcoal



WF1521567FR | deep pacific\*



WF152185FR | blackbird

*\*Stocked items.*



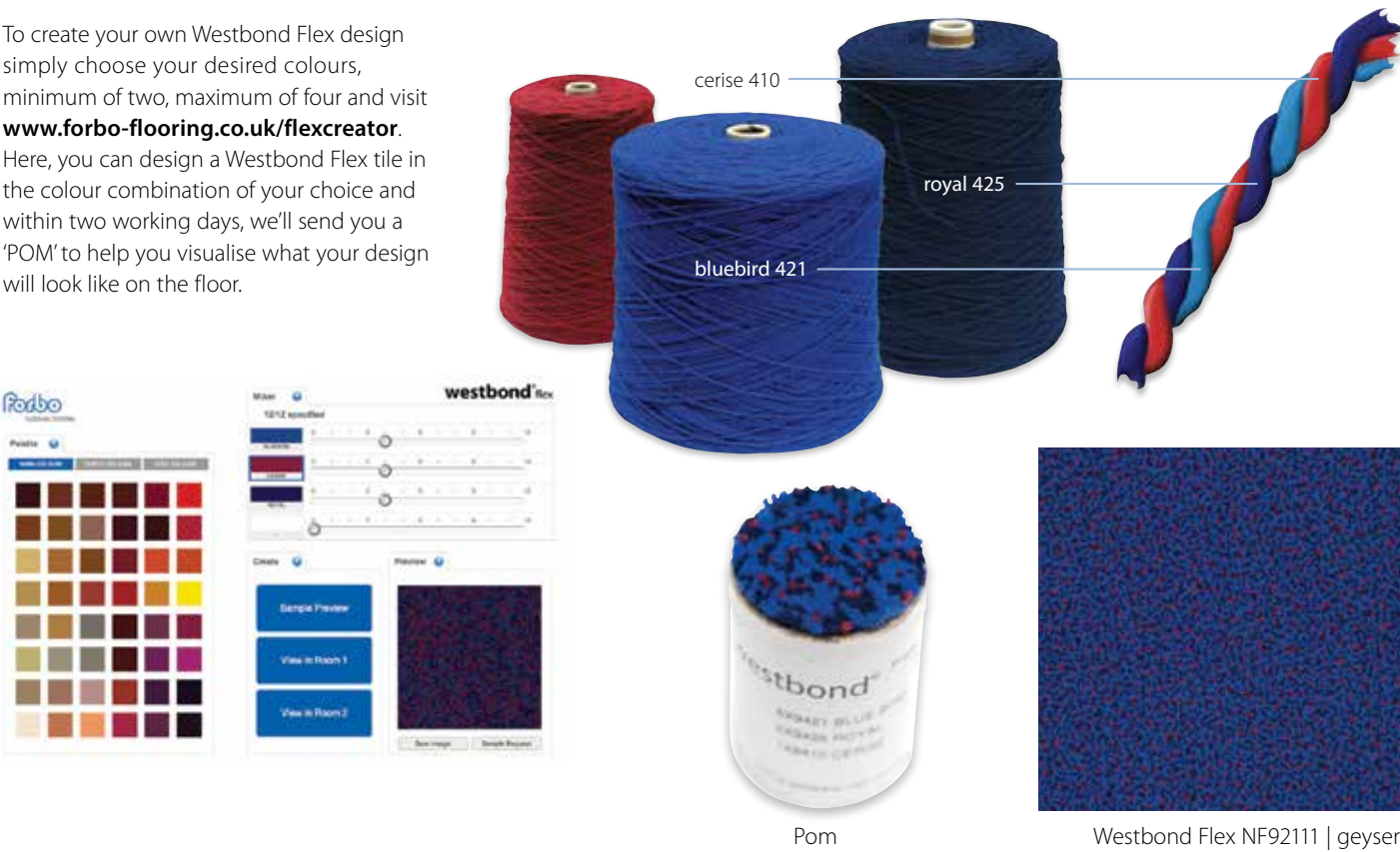
Westbond Flex carpet tiles are the ideal solution for those seeking a truly individual look to the floor. By mixing shades from the Westbond Colour collection, or from a custom colour of your choice, you can simply create your own custom designed Westbond Flex carpet tile.

Within two working days we will send you a 'POM' that offers a realistic impression of what the finished carpet tile will look like.



HOW TO CREATE **YOUR** UNIQUE **WESTBOND FLEX** DESIGN

To create your own Westbond Flex design simply choose your desired colours, minimum of two, maximum of four and visit [www.forbo-flooring.co.uk/flexcreator](http://www.forbo-flooring.co.uk/flexcreator). Here, you can design a Westbond Flex tile in the colour combination of your choice and within two working days, we'll send you a 'POM' to help you visualise what your design will look like on the floor.



Shown above are three plain yarns, which are combined together to create a chosen Flex design. A 'pom' is then created to help you visualise your unique finished carpet tile.

TECHNICAL SPECIFICATIONS

Technical specifications

Westbond FR meets the requirements of EN 1307

	Total thickness		10mm ± 10%
	Wear classification	EN 1307	Class 33
	Dimensions		50cm x 50cm
	Minimum order quantity		Stocked range 3.5m² (1 box). Custom colours 250m²
	Colour fastness ratings:		
	Light	EN ISO 105-B02	> 4
	Seawater	BS EN ISO-E02	4-5
	Pile material		80% dyed British wool/10% polyamide/10% polyester
	Construction		Fusion bonded carpet tiles
	Tile backing		Flame retardant PVC
	Total weight	ISO 8543	3600 gsm ± 10%
	Pile thickness	ISO 1766	7.5mm + 0mm/-0.5mm
	Pile weight	ISO 8543	1500 gsm ± 10%
	Pile density	ISO 8543	0.168 grams per cm³
	Impact sound insulation	ISO 10140-3	28 dB
	Dimensional stability	ISO 2551	< 0.2 %
	Comfort class	EN 1307	LC5
	Installation method		Monolithic, tessellated or quarter turn

Westbond FR fusion bonded carpet tiles meet the requirements of EN 14041

	Slip resistance	EN 13893	DS
	Electrical resistance	EN 10965 & EN1815	1 x 10 <sup>9</sup> Ω: Static dissipative. Body voltage < 2.0 kV
	Reaction to Fire/Smoke/Toxicity	IMO FTP code 2010 part 2 & 5	Passes the standards set by the IMO fire test procedures for use in vessels at sea

Westbond FR is made to order. Stocked items are shown on pages 16 and 17.  
IMO certified adhesives can be recommended upon request.

Final production might vary within commercial tolerances from sample.  
Manufacturing specifications subject to normal industry tolerances.  
Forbo reserves the right to improve the specification of its products without giving prior notice.  
Errors and omissions excepted.





Forbo Flooring Systems is part of the Forbo Group, a global leader in flooring and movement systems, and offers a full range of flooring products for commercial and affordable housing and new build markets. High quality linoleum, vinyl, textile, flocked and entrance flooring products combine functionality, colour and design, offering total flooring solutions for any environment.



## What to do now?

For more information about any of the products and services offered by Forbo Flooring Systems, to request samples/brochures or a visit then contact us:

Email: [transport@forbo.com](mailto:transport@forbo.com)

Website: [www.forbo-flooring.com/transport](http://www.forbo-flooring.com/transport)

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## Let us keep you up-to-date

Visit us at [transport-flooring.com](http://transport-flooring.com) for more information.

 LinkedIn: **Forbo Flooring Transport**

 **@forbotransport**

## TRANSPRESS

Email us at [transport@forbo.com](mailto:transport@forbo.com) to sign up to our quarterly transport newsletter for:

- *Product information*
- *Design inspiration*
- *Forbo transport news*
- *Industry news*

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FLOORING SYSTEMS

creating better environments