







20-41 Textile Floor Coverings

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provide you with an exceptional range of products to meet the necessary requirements.

Within our portfolio you will find high performance entrance systems, linoleum flooring, textile carpets and flocked floor coverings, and the widest range of design and colourways on the market, giving you a world of choice. We also supply all the necessary adhesives, accessories and specialist tools your installation team might need.

service level.

If you are looking for a totally unique flooring solution, your Forbo Account Manager will work directly with our experienced and talented in-house design team to deliver bespoke floor covering designs that are guaranteed to give your rail interiors a truly individual look.

- A custom design service
- Global advice, support and cross border project management

You can rely on Forbo to deliver an exceptional total flooring solution for your rail project.



The widest portfolio of floor coverings for rail



Floor coverings for rail:

tram metro regional high speed train

Entrance Systems

coral[®]FR

Key benefits:

Dirt removal, moisture absorption, soil hiding

coral[®]classic FR

coral®duo FR

coral[®] brush blend FR

coral®brush pure FR

Resilients

marmoleum® FR

Key benefits:

Natural, sustainable, scuff resistant, easy to clean

marmoleum® real FR

marmoleum® striato FR

Textiles

tessera® FR

Key benefits:

Warm, comfortable, slip resistant, good acoustic properties

tessera® alignment FR

tessera® helix FR

flotex[®]FR

Key benefits:

Easy to clean, extensive custom design capabilities, high durability

flotex colour FR

flotex vision FR

coral® move FR

Key benefits:

Extensive design capabilities, moisture absorption, warm, comfortable, high durability



coral[®]FR

First impressions are crucial, which is why effective entrance flooring that stops dirt and moisture being tracked into carriages and saloon areas is fundamental to modern train design.

By removing wet and dry soiling from the soles of shoes and wheel treads, an effective entrance system reduces premature wear and tear to interior floor coverings, minimises cleaning and maintenance costs and protects passengers by reducing slip hazards.

Benefits:

- High moisture absorption
- Dirt scraping for effective clean-off
- High dirt storage
- Advanced colouring and design choice
- Excellent soil hiding properties
- Reaction to fire EN 45545 : HL2

Providing the ideal solution for rail vehicle entrances, Coral entrance flooring is available in three different formats: Classic, Brush and Duo – each with their own unique benefits.





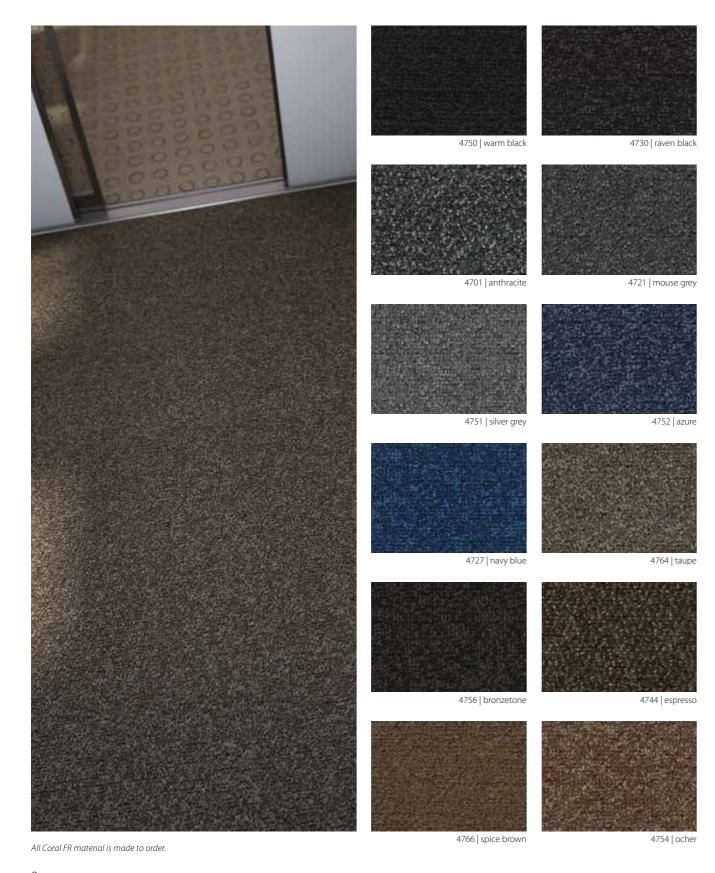


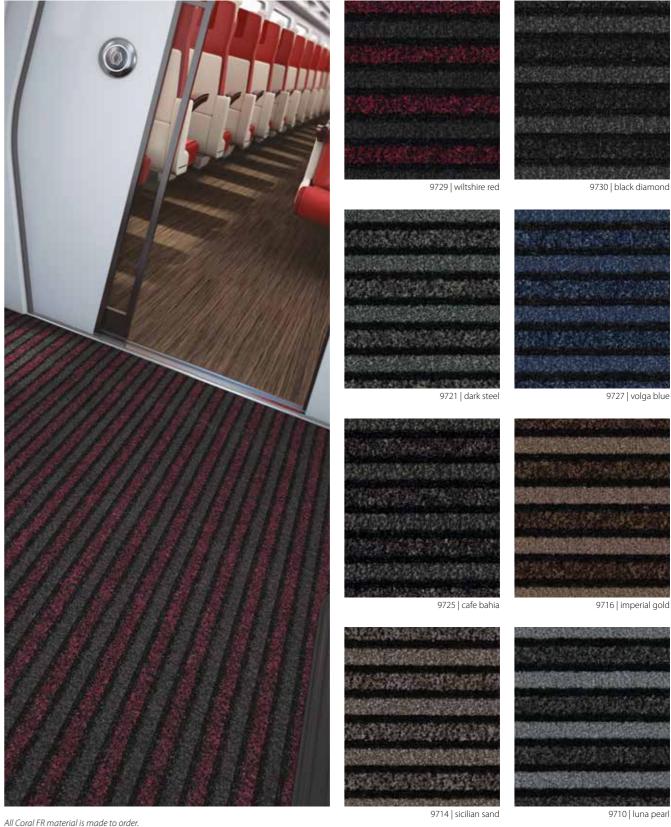
coral[®] classic FR

The ultimate moisture absorbing clean-off system. Coral Classic is available in 12 colours

coral®duo FR

For unbeatable soil removal, especially in compact areas. Coral Duo is available in 8 colours





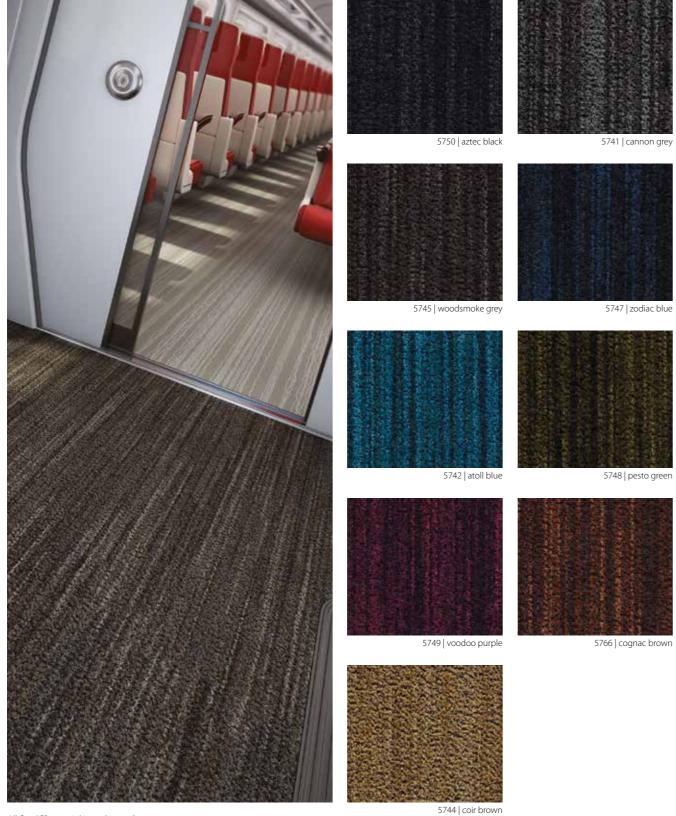
coral[®] brush blend FR

Unique design with exceptional performance. Coral Brush Blend is available in 9 colours

coral[®] brush pure FR

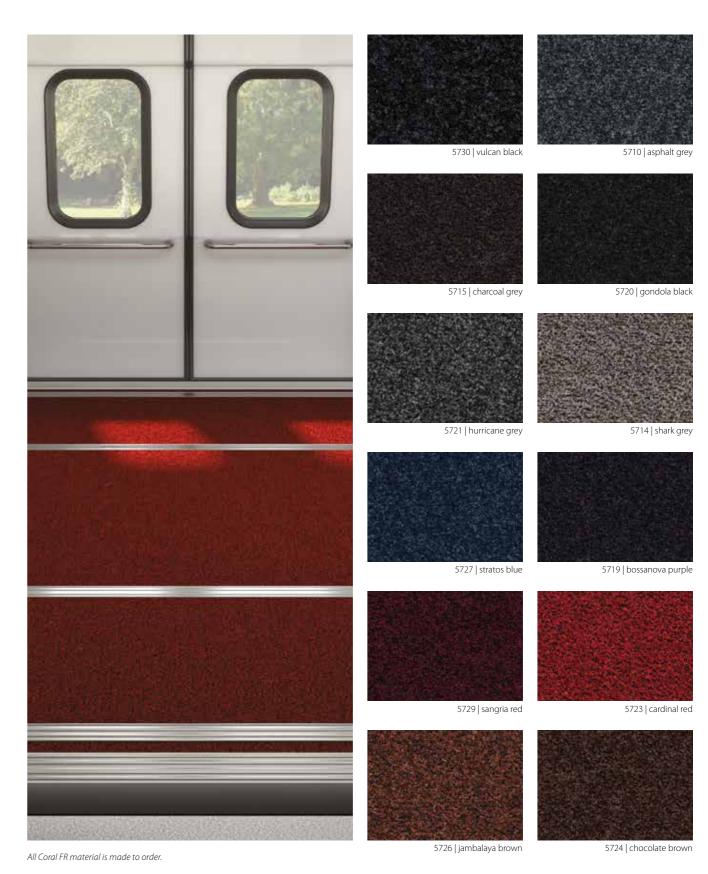
A complete all-rounder that removes both moisture and dirt.

Coral Brush Pure is available in 12 colours



All Coral FR material is made to order.

10







12

coral[®]FR

If you cannot see the exact colourway that you are looking for in any of our Coral FR entrance system collections, please speak to us and we will work closely with you in order to match your specific colour requirements.

TECHNICAL SPECIFICATIONS

| Technical speci | | Coral brush pure/blend FR | Coral classic FR | Coral duo FR |
|-------------------------------|----------------------------|--------------------------------------|-------------------------------------|---|
| Total thickness | ISO 1765 | 9 mm | 8.5 mm | 9 mm |
| Roll width | EN-ISO 24341 | 185 cm (customizable) | 185 cm (customizable) | 185 cm (customizable) |
| Roll length | EN-ISO 24341 | 27.5 m (customizable) | 27.5 m (customizable) | 27.5 m (customizable) |
| Minimum order quantity | | 50 m ² | 50 m ² | 50 m ² |
| Total weight | ISO 8543 | 3400 gram/m ² | 3400 gram/m ² | 3000 gram/m ² |
| Pile installation weight | ISO 8543 | 920 gram/m ² | 900 gram/m² | 670 gram/m² |
| Pile thickness | ISO 1766 | 6.0 mm | 6.0 mm | 6.0 mm |
| Pile material | | 100% regenerated Econyl polyamide | 100% polyamide-BCF solution dyed | 100% polyamide of which 66 is regenerated Econyl polyar |
| Light fastness | EN-ISO 105/B02 | 4-5 | 7-8 | 4-5 |
| Electrical resistance | ISO 10965 | > 10° Ω | > 10 ⁹ Ω | > 10 ⁹ Ω |
| Contact sound insulation | EN-ISO 717-2 | Δ Lw = approx 32 dB | Δ Lw = approx 31 dB | |
| Tested flammability standards | EN 45545-2 | HL2 | HL2 | HL2 |
| | BS6853 | 1b | 1b | |
| | DIN 5510-2 | | SF 1-3 | |
| | ASTM E.648 ASTM E.662 | Class 1 pass | Class 1 pass | Class 1 pass |
| | NF P 92-501 NF F 16-101 | M3 F1 | M2 F1 | M3 F1 |
| | | | | (|
| Coral meets the requ | uirements of EN 1404 | | | EN |
| Fire behaviour | EN 13501-1 | B _{FL} -s1 | B _{FL} -s1 | B _{FL} -s1 |
| Slip resistance | EN 13893 | DS: ≥ 0.30 | DS: ≥ 0.30 | DS: ≥ 0.30 |
| Body voltage | ISO 6356 | < 2 kV | < 2 kV | < 2 kV |
| Thermal conductivity | EN 12524 | 0.093 m ² K/W | 0.13 m ² K/W | 0.140 m ² K/W |
| | | | | |

Coral FR is made to order



marmoleum® FR

Marmoleum has a history and heritage that stretches back over 150 years and this totally natural floor covering has always been renowned for its sustainability, durability and high quality.

For the rail sector Marmoleum FR offers total versatility in terms of colour and design, but what makes this floor covering really stand out is the fact that it is created using a high percentage of natural raw materials, with renewable and recycled content.

All Marmoleum FR floors include Topshield2, a double layer, UV-cured finish that is scratch and scuff resistant, easy to maintain and ensures long lasting appearance retention. With its natural bacteriostatic properties and resistance to chemicals, Marmoleum FR is the ideal solution for heavy traffic rail vehicles.

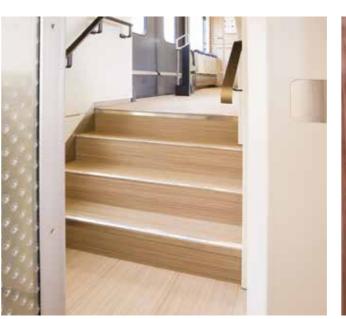
Benefits:

- Homogeneous durable construction
- Low life cycle costs can be renovated and repaired
- Resistance to cigarette burns
- Wide range of colourways per design
- Reaction to fire EN 45545: HL2 / HL3











marmoleum[®] real FR

Combining sustainability and durability with high quality and innovative interiors.

3252 | sparrow

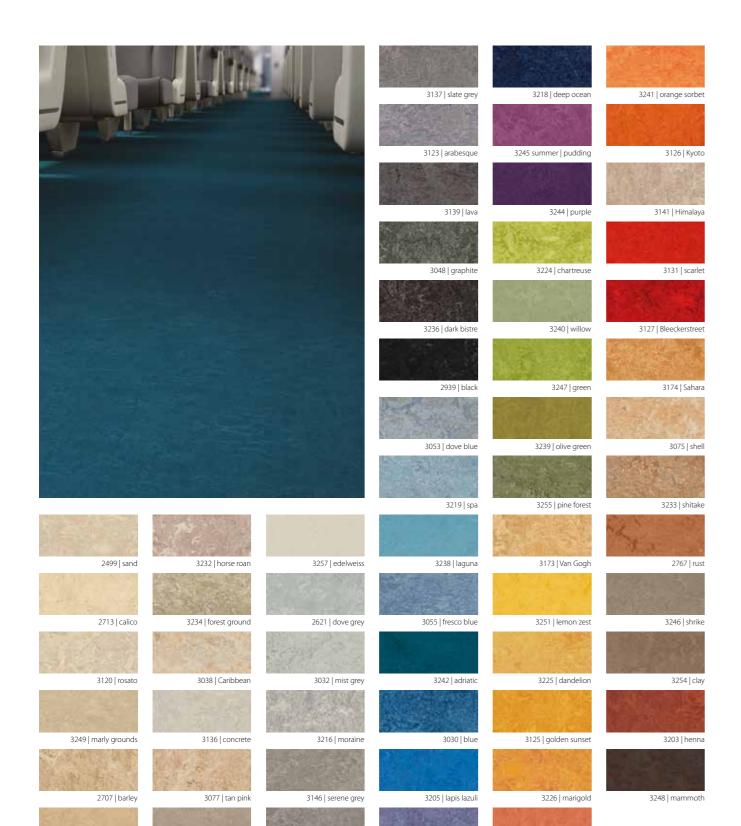
3250 | loam groove

Marmoleum FR available in 59 colours

marmoleum[®] striato FR

Offering a distinctive directional design, complemented by natural interiors.

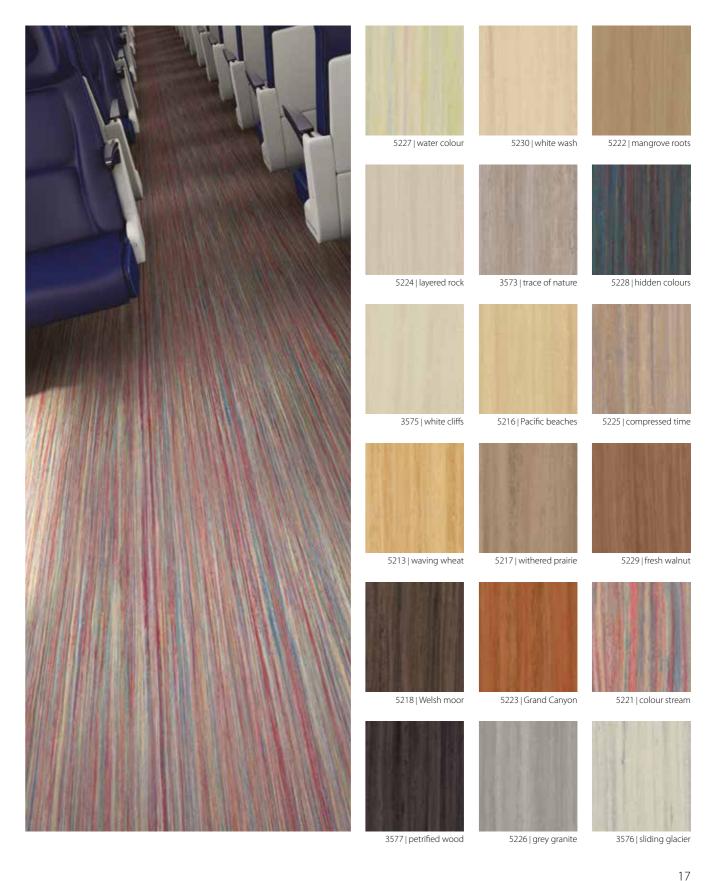
Marmoleum Striato available in 18 colours



2629 | eiger

3221 | hyacinth

3243 | stucco rosso





Recolour certain designs with Marmoleum

marmoleum® FR

If you cannot see the exact colourway that you are looking for, please speak to us and we will work closely with you in order to match your specific requirements.

TECHNICAL SPECIFICATIONS

| Marmoleum meets the re | quirements of EN ISO 24011 | Marmoleum real FR | Marmoleum striato FR | |
|--------------------------------------|----------------------------|---|--|--|
| Total thickness | EN-ISO 24346 | 2.5 mm | 2.5 mm | |
| Roll width | EN-ISO 24341 | 200 cm | 200 cm | |
| Roll length | EN-ISO 24341 | ≤ 32 m | ≤ 32 m | |
| Minimum order quantity | | 3000 m ² | 3000 m ² | |
| Total weight | EN-ISO 23997 | 2900 gram/m ² | 2900 gram/m² | |
| Residual indentation | EN-ISO 24343-1 | ≤ 0.15 mm | ≤ 0.15 mm | |
| Light fastness | EN-ISO 105/B02 | ≥ 6 | ≥6 | |
| Flexibilty | EN-ISO 24344 | Ø 40 mm | Ø 40 mm | |
| Resistance to EN-ISO 26987 chemicals | | Resistant to diluted acids, oils, fats and to the conventional solvents. Not resistant to prolonged exposure to alkalis. | Resistant to diluted acids, oils, fats and to the conventional solvents. Not resistant to prolonged exposure to alkalis. | |
| Electrical resistance | EN 1081 | 1-10 ⁶ <r1<1-10<sup>8Ω</r1<1-10<sup> | 1-10 ⁶ <r1<1-10<sup>8Ω</r1<1-10<sup> | |
| Contact sound insulation | ISO 717-2 | $\Delta Lw = \geq 5 dB$ | $\Delta Lw = \geq 5 dB$ | |
| Tested flammability standards | EN 45545-2 | HL2 | HL3 | |
| stariuarus | BS6853 | 1a | | |
| | DIN 5510-2 | SF 1-3 | SF 1-3 | |
| | ASTM E.648 ASTM E.662 | Class 1 pass | | |
| M | | | (| |
| Marmoleum meets the re | | | EN 1 | |
| Fire behaviour | EN 13501-1 | B _{FL} -s1 | B _{FL} -s1 | |
| Slip resistance | EN 13893 | DS: ≥ 0.30 | DS: ≥ 0.30 | |
| Body voltage | EN 1815 | < 2 kV | < 2 kV | |
| Thermal conductivity | EN 12524 | 0.17 W/m·K | 0.17 W/m·K | |

Marmoleum FR is made to order

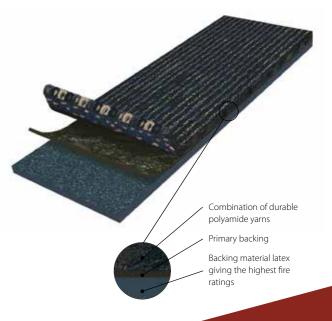


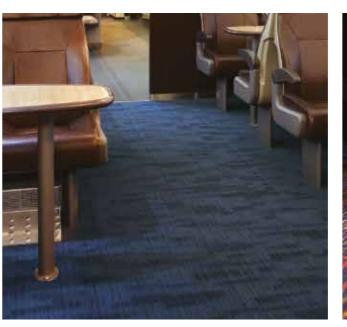
tessera® FR

Tessera FR is a collection of attractive, hardwearing carpets, offered in various pile constructions and textures, all designed to deliver specific aesthetic and performance benefits. The installation of carpet in a rail vehicle adds significant warmth, comfort and acoustic benefits.

Benefits:

- Durability and appearance retention, made from 100% nylon
- Flexibility for colourisation
- Slip resistance
- Reaction to fire EN 45545 : HL2







tessera® alignment FR

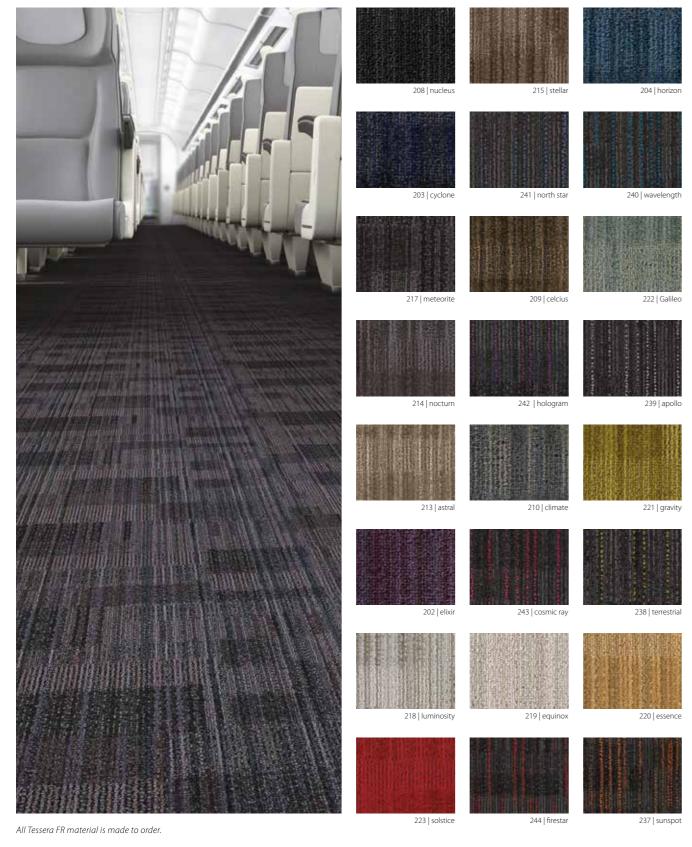
Sophisticated and cleverly textured to complement the most contemporary interior design.

Tessera Alignment available in 24 colours

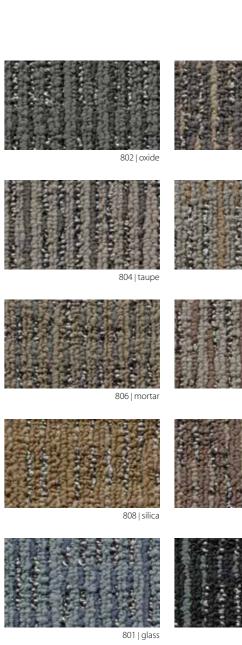
tessera® helix FR

An understated linear design, combining rich texture and visual appeal.

Tessera Helix available in 13 colours







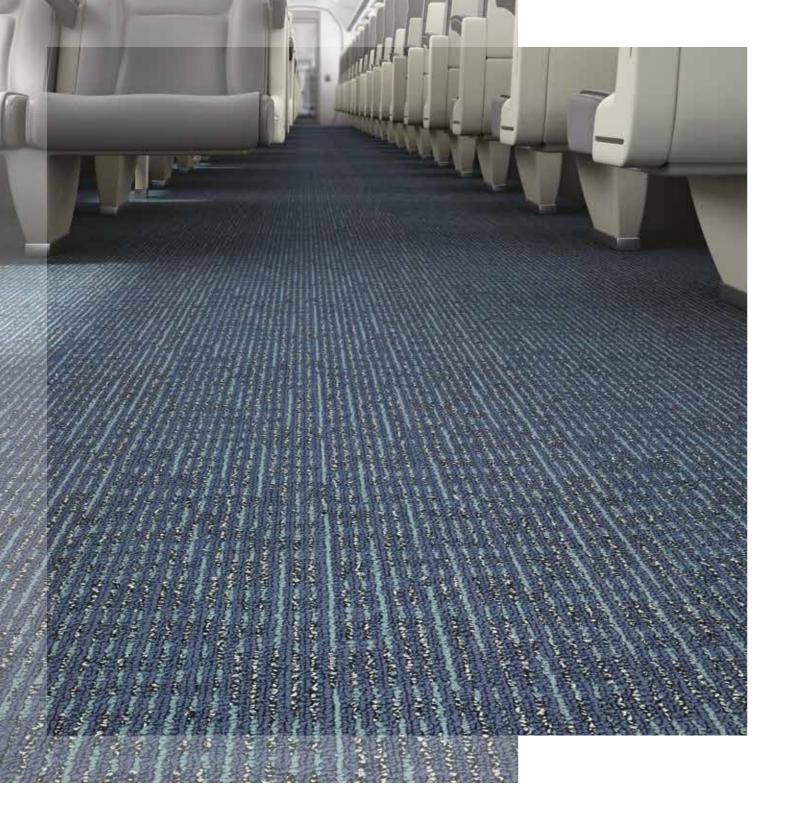








All Tessera FR material is made to order.



Recolour certain designs with Tessera

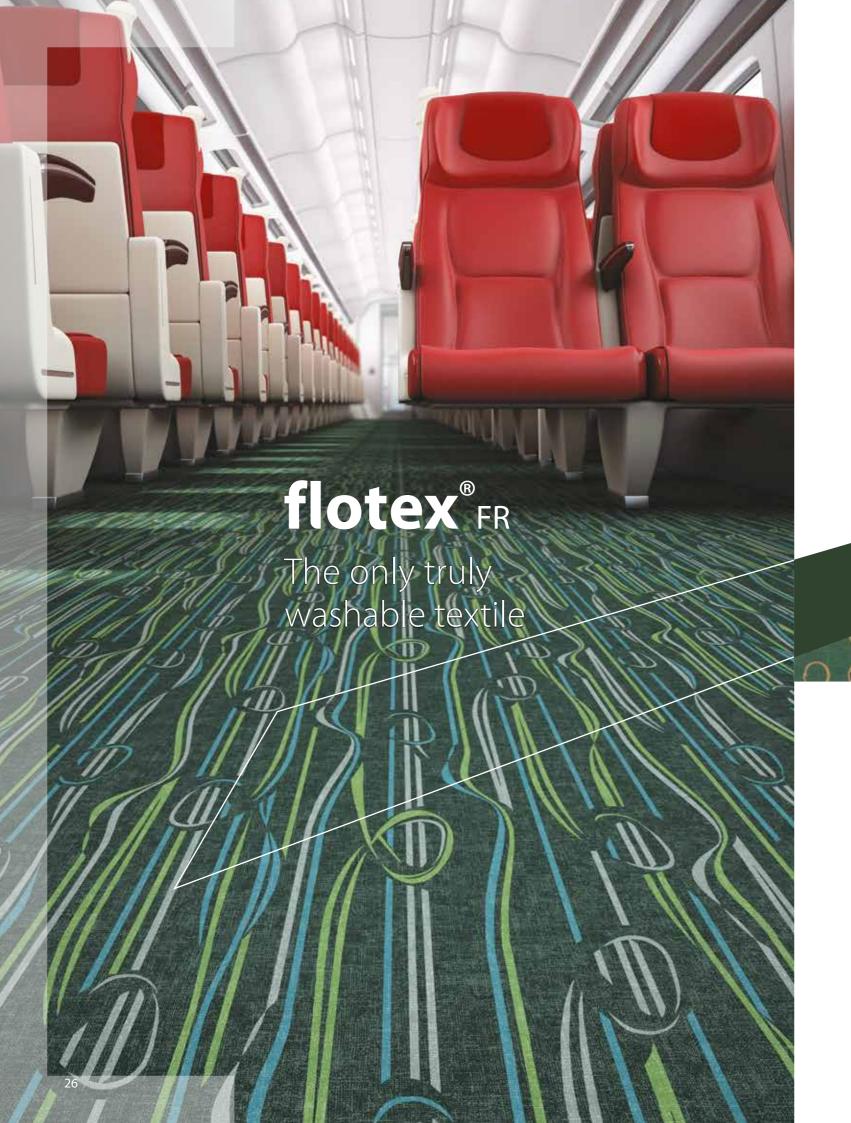
tessera®_{FR}

If you cannot see the exact colourway that you are looking for in any of our Tessera FR designs, please speak to us and we will work with you in order to match your specific requirements.

TECHNICAL SPECIFICATIONS

| Technical specification Tessera meets the require | | Tessera helix FR | Tessera alignment FR | |
|---|--------------------------|---|---|--|
| Total thickness | ISO 1765 | 6 mm | 6 mm | |
| Roll width EN-ISO 24341 | | 185 cm (customizable) | 185 cm (customizable) | |
| Roll length EN-ISO 24341 | | 27.5 m (customizable) | 27.5 m (customizable) | |
| Minimum order quantity | , | Standard range – 50 m² Custom colour – 1100 m² | Standard range – 50 m² Custom colour – 1100 m² | |
| Total weight ISO 8543 | | 3000 gram/m ² | 3000 gram/m² | |
| Pile installation usight ISO 8543 | | 740 gram/m ² | 730 gram/m² | |
| Pile thickness | ISO 1766 | 4 mm | 4 mm | |
| Pile material | | 100% polyamide-BCF | 100% polyamide-BCF | |
| Light fastness | EN-ISO 105/B02 | 7-8 | 7-8 | |
| Electrical resistance | ISO 10965 | >10°Ω | > 10°Ω | |
| Tested flammability standards | EN 45545-2 | HL2 | HL2 | |
| | BS6853 | 1b | | |
| | DIN 5510-2 | SF 1-3 | SF 1-3 | |
| | ASTM E.648 ASTM E.662 | Class 1 pass | Class 1 pass | |
| Tessera meets the requir | ements of EN 14041 | | E | |
| Fire behaviour | EN 13501-1 | B _{FL} -s1 | B _{FL} -s1 | |
| Slip resistance | EN 13893 | DS: ≥ 0.30 | DS: ≥ 0.30 | |
| Body voltage ISO 6356 | | < 2.5 kV | < 2.5 kV | |

Tessera FR is made to order

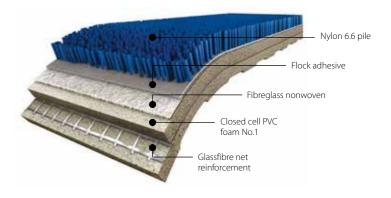


flotex[®]FR

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

Benefits

- High durability
- Hygienic
- Easy to clean; easy soil and stain removal due to short nylon fibres
- Slip resistant
- Bacteriostatic
- Improved indoor air quality (independently proven by Allergy UK)
- Reaction to fire EN 45545 : HL2



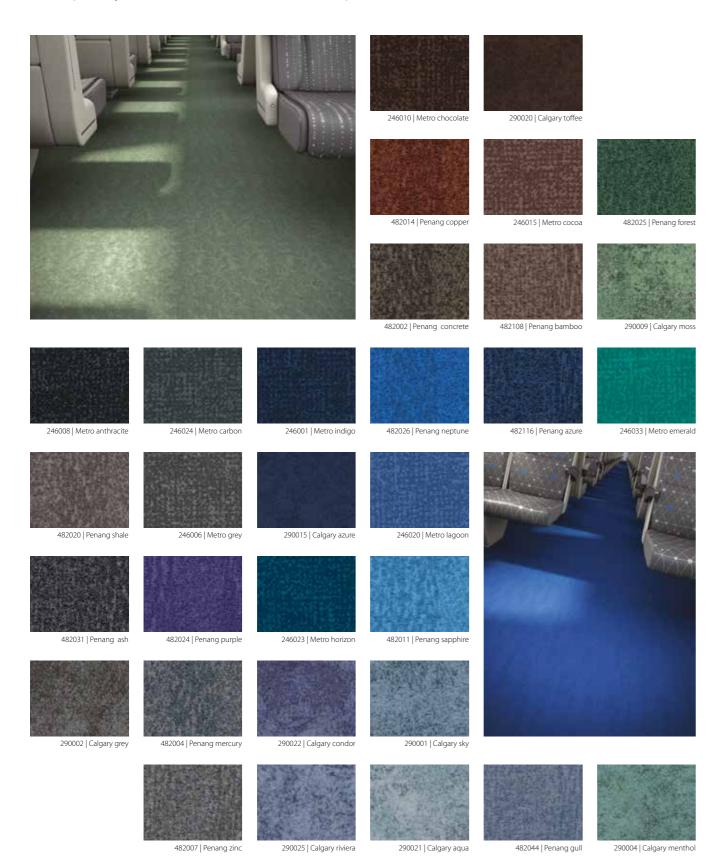




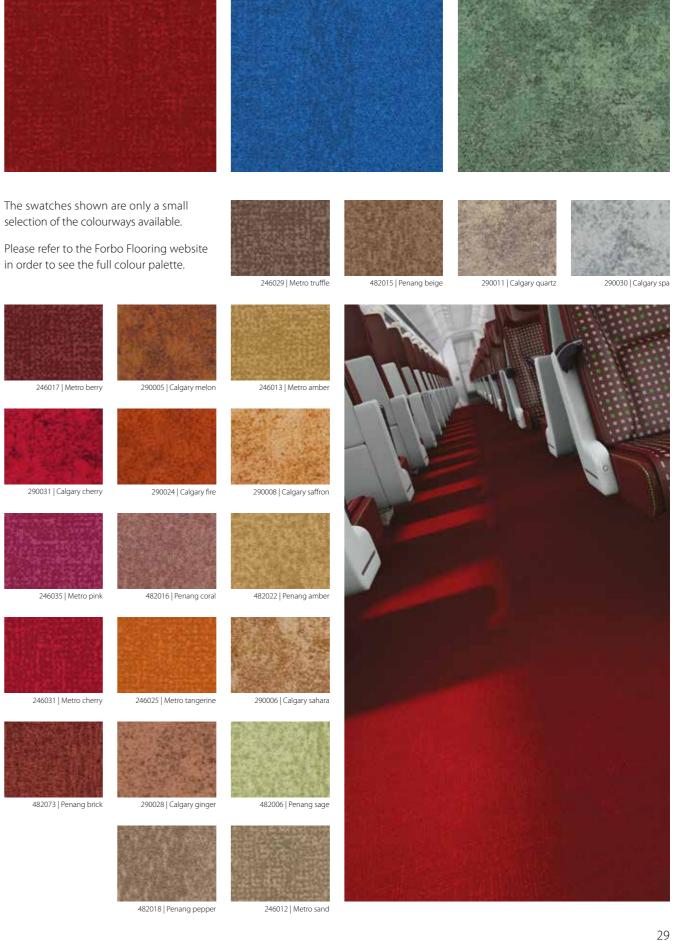
Flotex's upright fibres enable easy removal of soil and stains

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.







flotex penang FR

flotex [®] calgary FR

28 Flotex Colour designs have no pattern repeats.

flotex vision FR

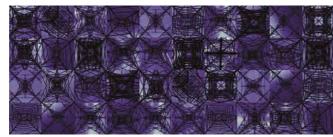
Flotex Vision FR offers an infinite number of design options ranging from abstracts with an intricate colour spectrum to realistic images of natural materials.





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.



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.

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.





SHAPE

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



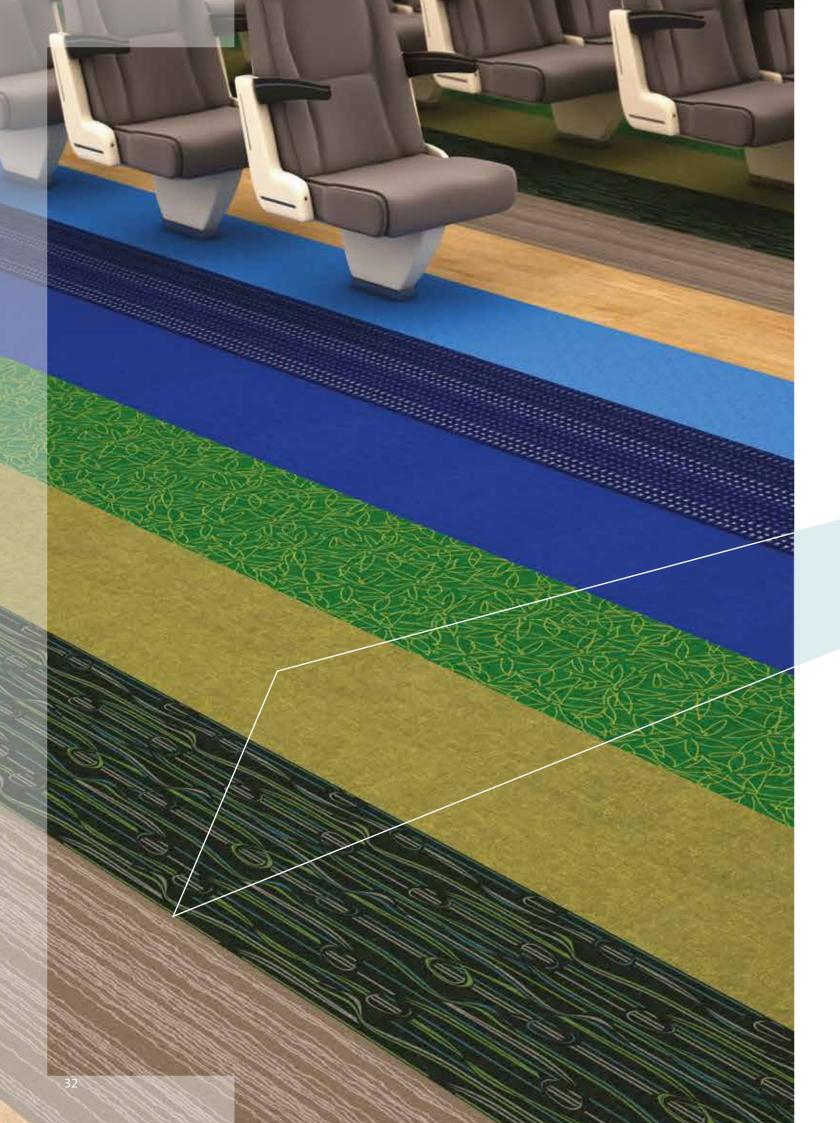
FLORAL

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



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.



flotex [®] vision FR

Total design freedom

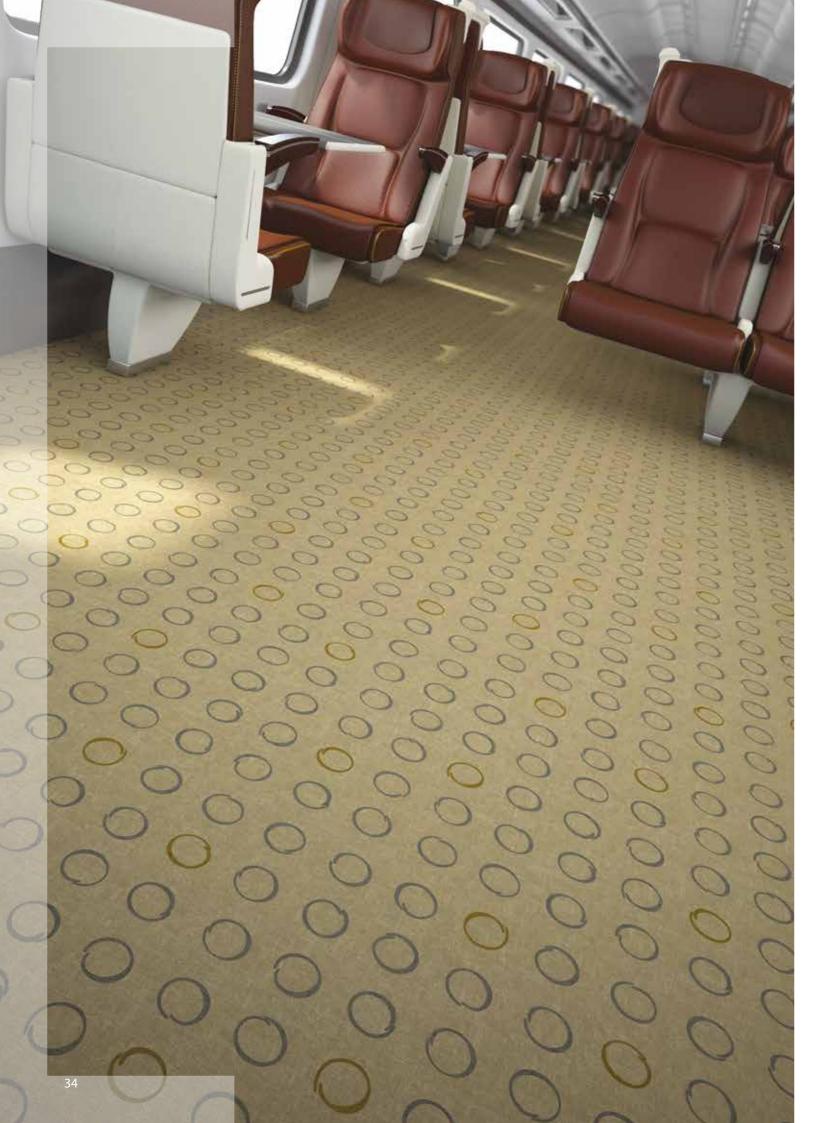
Flotex Vision FR is a collection of high definition digital print designs that create superior textures with almost 3D like appearance. As Flotex Vision FR has 70 million fibres per square per metre, it provides a matt high density substrate for printing, enabling vibrant designs and trueto-life visuals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

Several 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 bespoke design service on





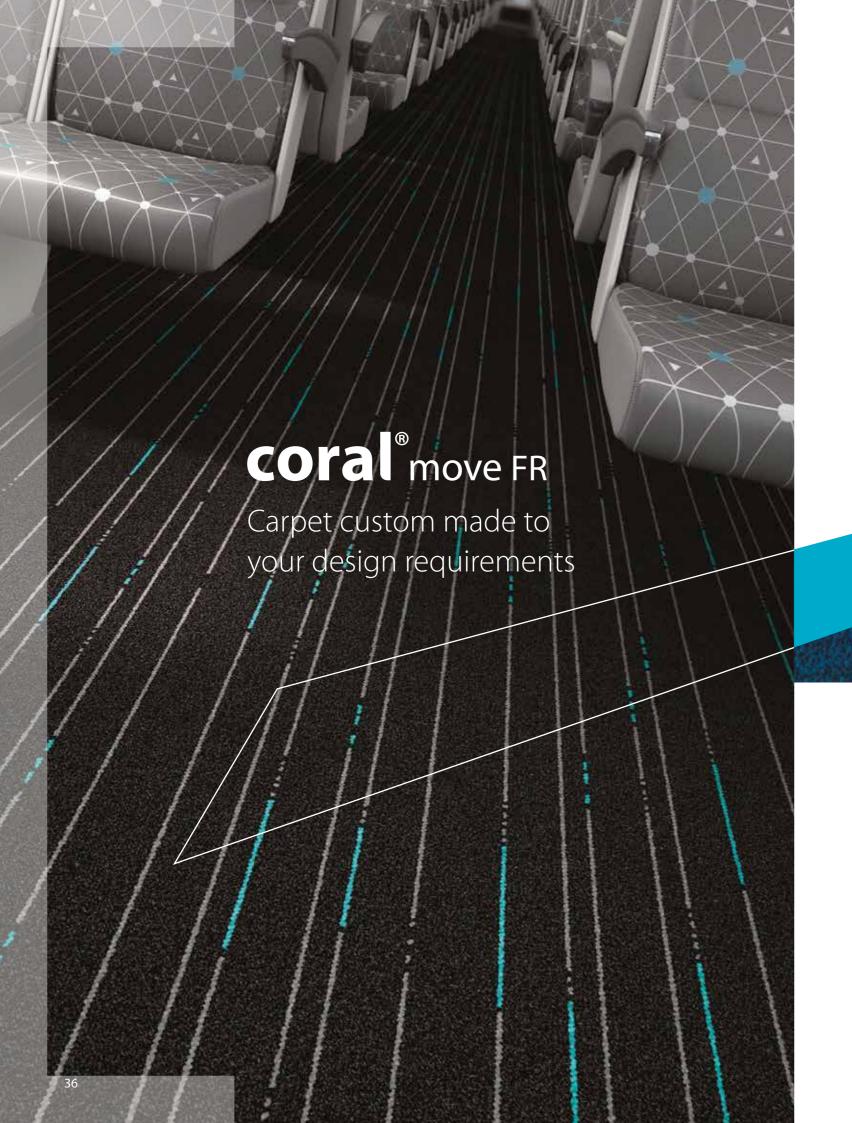
www.flotexvision.com



TECHNICAL SPECIFICATIONS

| Technical specifications Flotex meets the requirements of EN 1307 | | Flotex FR Flotex HD FR | |
|--|--------------------------|---|--|
| Total thickness | ISO 1765 | 3.3 mm | |
| Roll width | EN-ISO 24341 | 200 cm | |
| Roll length | EN-ISO 24341 | 30 m | |
| Minimum order quantity | | 200 m ² / 1000 m ² (HD) | |
| Total weight | ISO 8543 | 1225 gram/m² | |
| Pile installation weight | ISO 8543 | 250 gram/m ² | |
| Pile thickness | ISO 1766 | Approx 2 mm | |
| Pile material | | 100% polyamide | |
| Dimensional stability | ISO 2551 | ≤ 0.20% | |
| Light fastness | EN ISO 105/B02 | ≥ 6 | |
| Electrical resistance | ISO 10965 | ≥ 10°Ω | |
| Contact sound insulation | ISO 717-2 | Δ Lw = approx 22 dB | |
| Tested flammability standards | EN 45545-2 | HL2 | |
| | BS6853 | 1b | |
| | DIN 5510-2 | SF 1-3 | |
| | ASTM E.648 ASTM E.662 | Class 1 pass | |
| Flotex meets the requirements | of EN 14041 | EN | |
| Fire behaviour | EN 13501-1 | B _{FL} -s1 | |
| Slip resistance | EN 13893 | DS: ≥ 0.30 | |
| Body voltage | ISO 6356 | < 2 kV | |

Flotex FR is made to order



coral®move FR

Coral Move FR is a tufted carpet solution for rail interiors offering great customisation possibilities to complement interior design and colour schemes.

Benefits:

- Warm and comfortable
- Reaction to fire EN 45545 : HL2
- Excellent soil hiding
- Slip resistant
- Acoustic properties





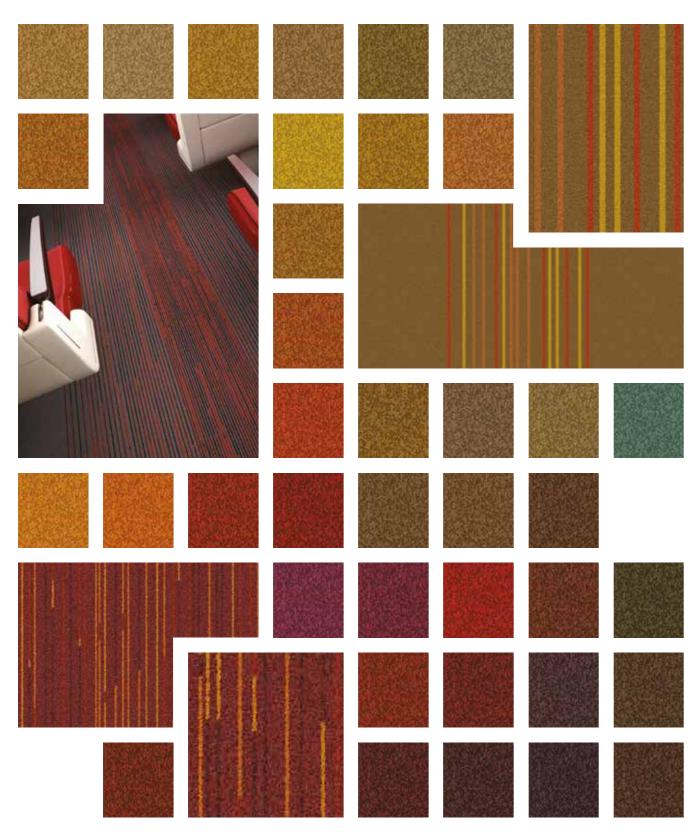


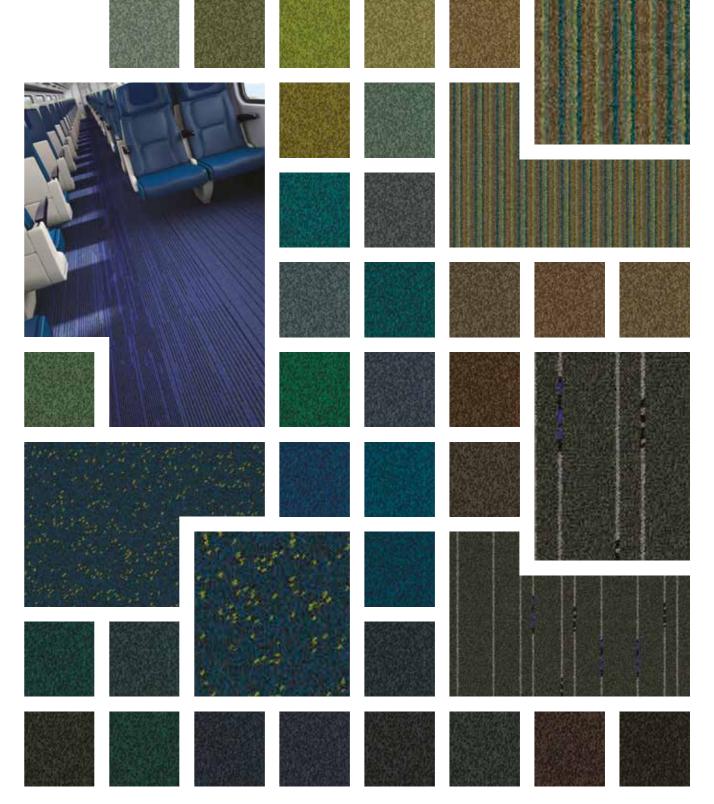
coral® move FR

Coral Move FR is a bespoke made to order product and our design team will work to match design and colour requirements on an individual project by project basis.

Below are just some examples of the designs you can create with Coral Move FR.

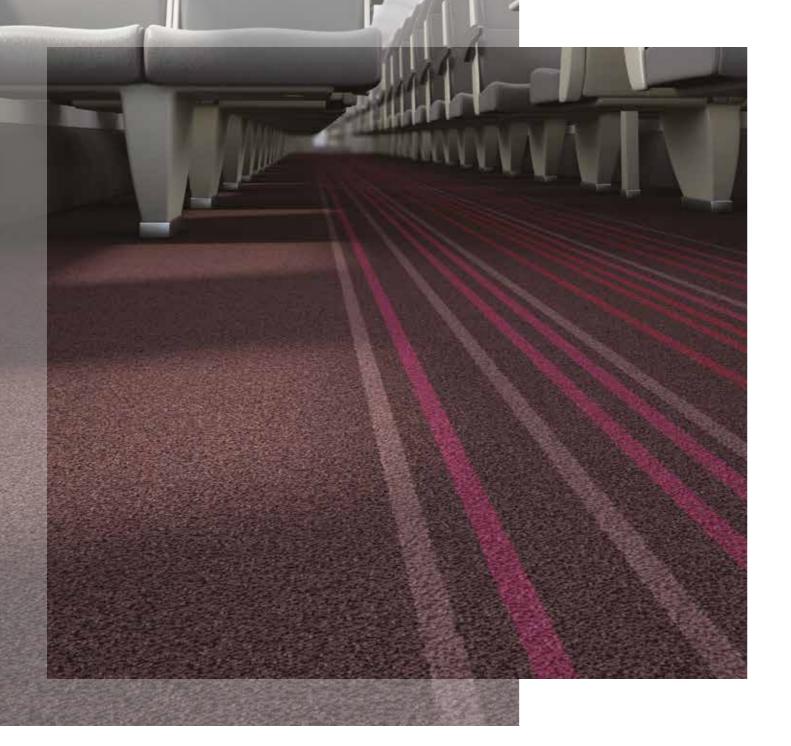
Coral Move is available in 136 colours





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

All Coral Move material is made to order.





coral® move FR



TECHNICAL SPECIFICATIONS

| Technical specifications Coral meets the requirements of EN 1307 | | Coral move FR | |
|---|-----------------|----------------------------|--|
| Total thickness | ISO 1765 | 8 mm | |
| Roll width EN-ISO 24341 | | 185 cm (customizable) | |
| Roll length | EN-ISO 24341 | 27.5 m (customizable) | |
| Minimum order quantity | | 500 m ² | |
| Total weight | ISO 8543 | 3000 gram/m² | |
| Pile installation weight | ISO 8543 | 750 gram/m² | |
| Pile thickness ISO 1766 | | 5.5 mm | |
| Pile material | | 100% polyamide BCF ECONYL® | |
| Colour fastness ratings: | | | |
| Light | EN ISO 105/B02 | 8 | |
| Rubbing | EN ISO 105/X12 | 4-5 | |
| Water | EN ISO 105/E01 | 4-5 | |
| Seawater | EN ISO 105/E02 | 5 | |
| Water stains | EN 1307 annex G | 5 | |
| Shampoo | BS 1006 | 4-5 | |
| Organic solvents | EN ISO 105/X05 | 5 | |
| Tested flammability standards | EN 45545-2 | HL2 | |
| | | | |
| Coral meets the requirements of | of EN 14041 | E | |
| Fire behaviour | EN 13501-1 | B _{FL} -s1 | |
| Slip resistance | EN 13893 | DS: ≥ 0.30 | |
| Body voltage ISO 6356 | | < 2 kV | |
| Thermal conductivity EN 12524 | | 0.108 m ² K/W | |

Coral move FR is made to order

SERVICE PRODUCTS







Multicolour welding rod

Adhesives

Welding rods

Welding rods ensure high levels of hygiene because they make seams easy to clean while preventing water from penetrating the floor covering. Forbo offers welding rods in matching colours with each item. Gloweld is a unique welding rod for the application with linoleum. Gloweld glows in the dark and can therefore be used for signalling and or safety purposes.



Forbo Flooring offers their own adhesives for all of their flooring products, we can offer the best adhesive for your specific type of application.

Installation tools and training

Based on our experience and our continuous research we can recommend and supply a complete assortment of high-grade installation tools. These will help you to achieve a simple and professional installation of our floor coverings. Forbo can provide you with an off- or onsite installation training.

Aquajet

We recognise that sometimes a client wishes to create something totally unique, perhaps something specific to a particular project, such as signage to facilitate the restrictions and safety guidelines within the train. Whatever may be required, our in-house design team has skills and experience to turn ideas into reality.

From an initial concept, detailed drawing, or computer file, our design team prepares a flooring design that is transferred electronically to our Aquajet cutting

machines. These computer-controlled machines represent state-of-the-art cutting technology and produce precision cut items accurate to a fraction of a millimetre. The pattern is inlaid and, importantly, retains all the performance characteristics of the original product. Whether it is a complete rail layout in floor covering, a company logo, signage or thematic design, the possibilities are limitless.



Cleaning and Maintenance data sheets are available online at forbo-flooring.com/transportation

