food & beverage processing flooring guide

vebro polymers

a big hello from vebro

Vebro Polymers is a global supplier of polymer flooring solutions, specialist coatings, pump screeds, rapid-drying screed additives and car park deck wearing and waterproofing solutions.

Our products and systems have been expertly designed for use in a wide variety of applications.

We can also provide specialist materials for use on fast turnaround new-build or renovation projects as well as those required for external applications or subfloor preparation prior to the installation of final finishes.

industries we serve

industrial & manufacturing

food & beverage

parking garages

commercial venues

prison buildings

shopping centres

institutional buildings

mixed-use developments

transport & infrastructure

external areas

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our **big** promise

Vebro Polymers has been formed by like-minded individuals who have hundreds of years' combined experience in the polymer flooring, coatings and construction chemicals industry.

The company was founded on a simple service promise to customers, which aims to provide the best quality, agility and reliability in the industry.

Quality

Agility

Reliability

global team, local expertise

Founded in the UK, Vebro Polymers has grown, establishing hub HQs and partnerships to serve local markets across the world.

polymer flooring explained

what is polymer flooring?

Polymerisation is, in short, a chemical reaction between multiple components to create a polymer.

Although the components of a polymer floor are primarily liquid (other than added decorative flakes, filler aggregates, texturising sand or anti-slip quartz beads), the chemical reaction results in a hard, durable surface.

There are different types of polymer flooring, each with its own unique performance characteristics.

Technology	Best for…
Epoxy	Applications where durability and chemical resistance are required
Polyurethane	Applications where elasticity, impact resistance and UV stability are required
Polyurethane Concrete	Heavy-duty applications and areas of thermal shock
Comfort PU Liquid Vinyl	Commercial applications where design and improved indoor environmental quality are of high importance
Methyl Methacrylate (MMA)	Speedy applications, where a quick turnaround is required

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how is polymer flooring **installed?**

The first, and arguably most important, step in the installation of a resin floor system is preparation. The applicator will ensure that the substrate is smooth, level and free of contaminants like dust, oils or grease that may affect the integrity of the final finish.

Once the substrate is ready, resin flooring materials are installed by experienced applicators in layers. Depending on the type of floor system being installed, this process often starts with a primer layer, then body coats and sealers where necessary, ensuring each coat has cured to the appropriate degree before moving on to the next.

benefits of seamless resin vs. alternative floor finishes

- Seamless impervious finish, prevents the build-up of dirt in grout lines or at trims
- Hardwearing and durable to withstand the impact and traffic associated with heavy-duty processing environments
- Easy to clean & maintain hygiene, simply wipe away spillages with a damp cloth or mop
- Tailored anti-slip profiles to aid safety across the facility, without compromising cleaning requirements
- Temperature resistance as high as 130°C and good resistance to thermal cycling
- Wide range of finishes available to suit every area throughout the food & beverage processing facility

flooring for food processing frequently asked questions

Choosing protective flooring for food & beverage processing environments is far more complicated than just finding the cheapest coating product – or even worse – leaving the concrete uncoated!

Several other factors including durability, safety, resistance profile and cleanability as well as the cost, will all play a factor in influencing your decision.

To make it easier, we've compiled some of the key FAQs that will help to determine if resin flooring is the right choice for you and your food processing facility.

How often do resin floor coatings require repair & maintenance?

Resins are seamless in nature and don't include joints or grout lines, which are susceptible to harbouring dirt, grease, bacteria and stains in general. Dust and crumbs can simply be swept or hoovered away and the floor cleaned according to manufacturer's guidelines based on the surface profile of the floor.

Resin flooring is also extremely strong and durable, meaning that it has an extended service life compared to other floor coverings. Installed properly, and with the correct maintenance, it can last for years without cracking or peeling, meaning that you won't have to replace the floor or carry out repairs as frequently than you would if using other materials.

How can resin flooring help to protect against slips and trips?

Slips and trips are one of the most common accidents that occur in the workplace, and one of the reasons for this can be unsuitable floor coverings. With a staff body to protect, it is important to consider this when choosing a floor finish, as well as the service criteria that a floor will be subject to.

For example, areas subject to either wet processes, frequent spillages or those that employ rigorous cleaning regimes such as steam cleaning or hot water downs should take particular care to ensure an anti-slip finish when replacing floor coverings or coatings.

Liquid-applied resin floor systems are great to custom build any safety features that you require from your floor within your workspace, surface profiles can be tailored to include quartz, aluminium oxide, glass spheres or silicon carbide in order to enhance the slip resistance profile of the floor finish.

Is resin flooring durable enough for food processing facilities?

Food & beverage processing environments are often subject to heavy loads, equipment and machinery as well as rubber-wheeled forklift truck traffic and other punishing processes.

As a result, durability in a flooring material is often critical to avoid the risk of floor failure or the surface wearing far too soon and having the headache of having to replace it all over again!

Polyurethane concrete surfaces have a longer lifespan compared to most other flooring solutions and are highly resistant to impact and heavy-duty wear and tear.

Is resin flooring chemical resistant?

Epoxy, polyurethane, MMA and polyurethane concrete all exhibit good resistance to a range of chemicals associated with cleaning agents or foodstuffs.

For more aggressive chemicals or food & beverages ingredients such as hydrochloric acid, sugars, oils, blood and detergents, heavy-duty polyurethane concrete provides a resistant surface underfoot.

That said, not all chemicals are created equal, so it's important to check that your choice of flooring material will be suitable for the specific chemicals found in your processes or facility.

How does resin flooring stand up extremely low and high temperatures?

With an upper temperature resistance ranging between around 60°C for thinner systems and up to 130°C for those applied between 6.0 mm and 9.0 mm thick, polyurethane concrete can reliably resist hot water washdowns.

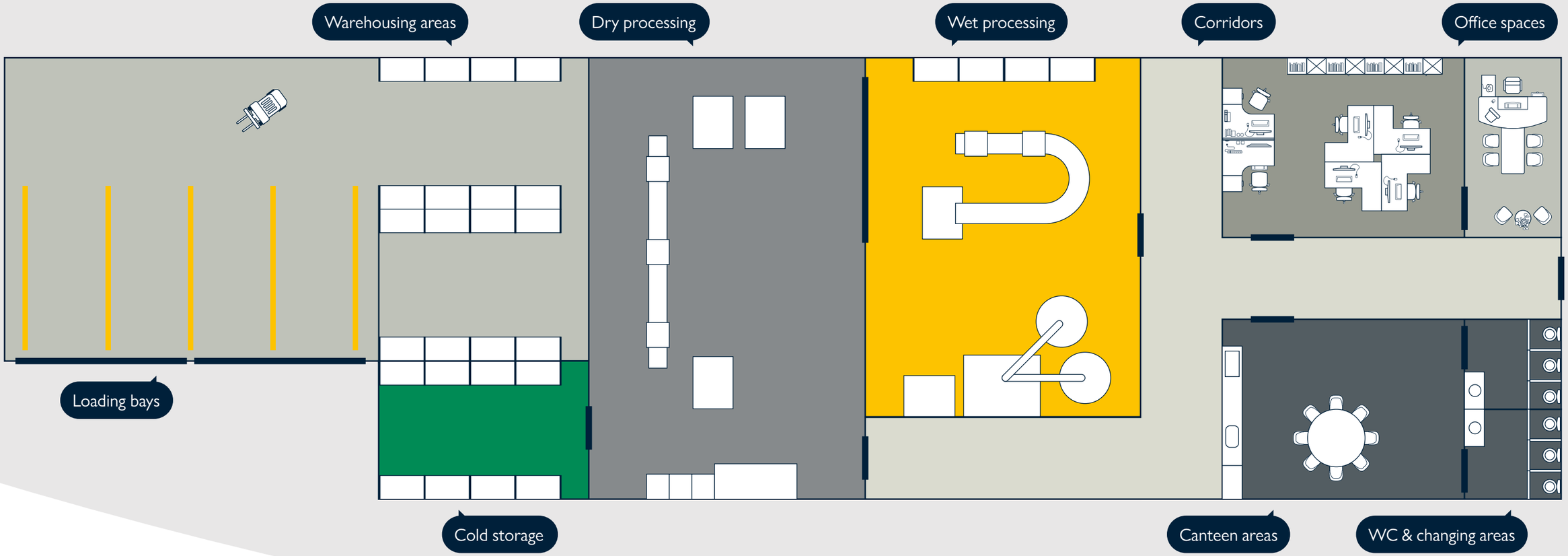
For areas facing lower temperatures, such as refrigerators and freezer storage, polyurethane concrete systems are capable of withstanding temperatures below freezing.

Although epoxy, polyurethane and MMA floor systems are able to cope with moderate temperature swings, they are not recommended for processing areas where freezing or boiling conditions are expected.

Are resin floors expensive?

Resin flooring can sometimes be more expensive in the short term than using other materials, this can be as a result of a potential increased cost of materials as well as the outlay for specialist trained resin contractors to install the product, but its durability alone makes it an extremely cost-effective option, as you won't need to replace it for many years.

And, when you take into account other savings that you can generate as a result of selecting resin flooring, such as reduced maintenance, cleaning and energy costs, it makes sense that an investment now will continue to pay dividends in the long term too!



food & beverage
floor systems selector

Each of Vebro Polymers' range of floor systems has been specifically designed to meet various service criteria.

For that reason, we've put together our recommended floor systems for each area of food & beverage processing facilities.

level with us…

If your substrate needs some attention, **vebro**screed systems are also available should any levelling be required prior to the installation of polymer finishes! Visit **vebro**polymers.com for more information.

vebropolymers.com

Vebro Polymers Floor System	Dry processing	Wet processing	Cold storage	Loading bays	Warehousing areas	Office spaces	Canteen areas	WC & changing areas	Corridors
vebrocrete SL	✓								
vebrocrete MF	✓								
vebrocrete SR	✓	✓							
vebrocrete HF		✓	✓						
vebrocrete RT		✓	✓						
vebrores EP HBC	✓	✓			✓				
vebrores EP SL					✓				✓
vebrospeed Flake						✓	✓		✓
vebrospeed Quartz	✓	✓						✓	✓
vebrodeck MMA ID	✓	✓		✓					
vebrodeck MMA Linemarker				✓					

food & beverage floor systems guide

From polyurethane floor screeds for processing areas, through to epoxy and MMA floor coating systems for back of house and warehousing spaces, Vebro Polymers offers a complete range of resin flooring materials for food & beverage production and processing facilities.

Vebro Polymers' range of epoxy, polyurethane and MMA flooring and deck coating systems are available in a wide range of standard, non-standard and premium colours. For your copy of the Vebro Polymers Colour Bible, visit **vebro**polymers.com.

what does it all **mean**?

Throughout this floor system guide, you will see a number of icons relating to the installation and performance features of each system recommended for food & beverage production and processing facilities. Here's what they all mean…

- Application thickness
- FeRFA type
- Working time
- Time before light foot traffic
- Full chemical curing time at 20°C

technically speaking…

Looking for technical information? Full technical profiles can be found in Vebro Polymers' technical datasheets.

For the most recent technical datasheets and standard system specifications, please visit www.**vebro**polymers.com

vebropolymers.com

polyurethane **floor screeds**

Performance criteria	vebrocrete SL	vebrocrete MF	vebrocrete SR	vebrocrete HF	vebrocrete RT
Best for…	Dry processing		Wet & dry processing	Wet processing & cold storage	
Thickness	2.0 – 3.0 mm	4.0 – 6.0 mm		6.0 – 9.0 mm	
Finish	S	S	T	T	T
Temperature resistance	Resistant to cleaning up to 60°C at a minimum of 3.0 mm	Resistant to cleaning up to 60°C at a minimum of 4.0 mm	Resistant to cleaning up to 60°C at a minimum of 3.0 mm	Resistant to spillages up to 70°C at 6.0 mm. Resistant to spillages up to 120°C. Fully steam cleanable at 9.0 mm.*	
Slip resistance *BS 7976-2: Pendulum Slip Test*	≥ 60 dry		≥ 40 wet (0.7 – 1.2 mm aggregate) ≥ 45 wet (1.2 – 1.8 mm aggregate) ≥ 50 wet (1.0 – 3.0 mm aggregate)	≥ 55 dry ≥ 40 wet	
Chemical resistance	Resistant to a very wide range of aggressive chemicals and corrosive by-products. For a full chemical resistance breakdown contact our Technical Services team.				
Abrasion Resistance *EN 13892-4 BS 8204-2*	AR 0.5 Special Class	-	-	-	-
Shore D hardness	75		-	-	-
Adhesion *EN 1504-2*	> 1.5 MPa				
Water absorption	-	-	-	0 litre / m^2	
VOC content *EU Directive 2004/42/EC*	< 10 g/l Category J Type SB (< 500 g/l)			< 12 g/l Category J Type SB (< 500 g/l)	
Working time	~15 minutes**				
Speed of cure *At 20°C*	Light Foot Traffic – 12 hours Light Wheeled Traffic – 24 hours Heavy Duty Traffic – 48 hours Full Chemical Cure – 7 days				

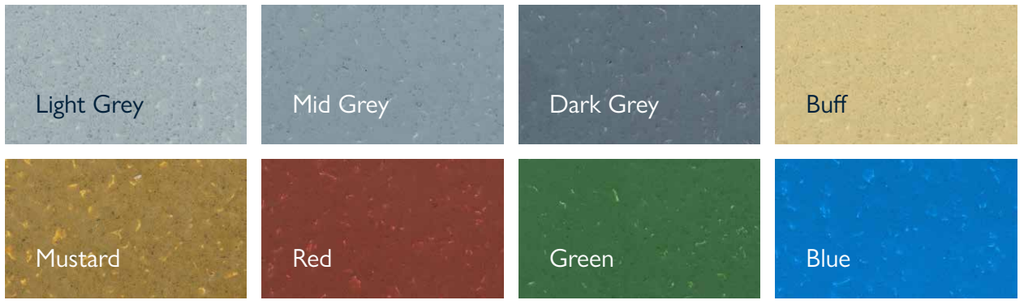
The typical physical properties given above are derived from testing in a controlled laboratory environment at 20°C. Results derived from testing field applied samples may vary dependent upon site conditions. The slip resistance figures given above are affected by application techniques and prevailing site conditions. Slip resistance can reduce over time due to poor maintenance, general wear or surface contaminants. Good housekeeping practices should be observed. *If subject to frequent thermal shock and cycling, a good quality substrate is essential. **Usable working life of material following mixing and immediate spreading as per the application instructions.

polyurethane screeds **colours**

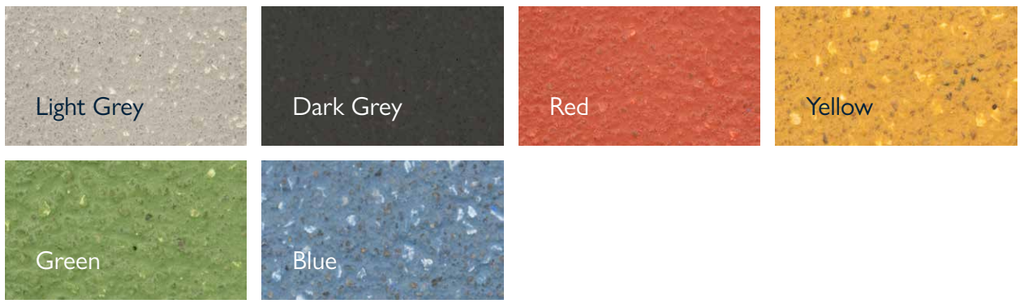
vebrocrete systems are available in a range of standard colours, ideally suited to food & beverage production and processing facilities.

(S) smooth finish | vebrocrete SR/RT

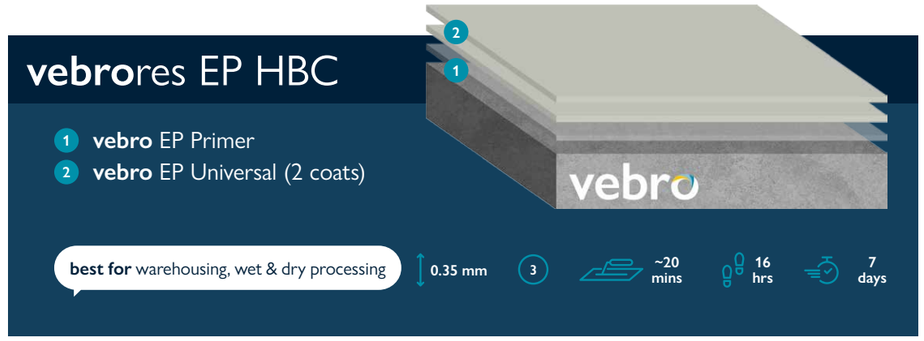
(T) textured finish | vebrocrete SL/MF

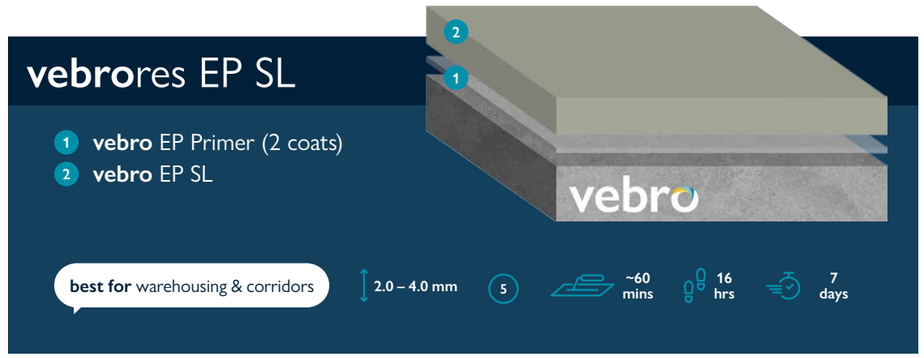


(T) textured finish | vebrocrete HF



epoxy floor coating systems





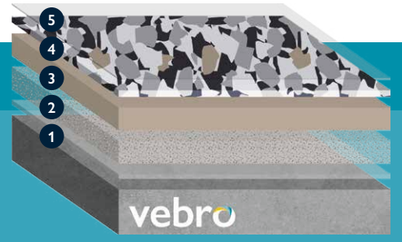
looking for colours?

vebrores systems are available in a range of Standard, Non-Standard and Premium colours. For more information, visit **vebro**polymers.com

vebropolymers.com

fast cure MMA
floor coating systems

vebrospeed Flake



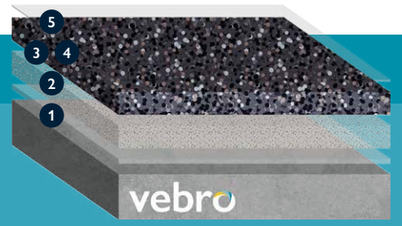
vebrospeed Flake is a highly decorative and durable UV-stable flooring system based on ultra fast-curing MMA (methyl methacrylate) resin technology.

Please note: Coving is available.

1. **vebro** MMA Primer
2. **vebro** Natural Quartz
3. **vebro** MMA Binder with **vebro** MMA Pigment & **vebro** MMA Filler
4. **vebro** Coloured Flake Blends
5. **vebro** MMA Seal (Clear Silk)

best for offices, canteens & corridors | 2.0 – 4.0 mm | 4 | 1 hr | 2 – 3 hrs

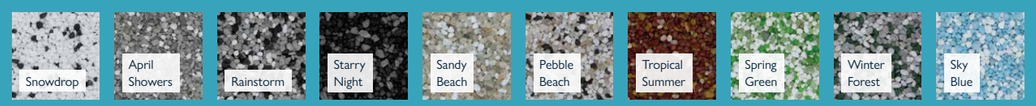
vebrospeed Quartz



vebrospeed Quartz is a highly durable and slip resistant, UV-stable quartz flooring system based on fast-cure MMA (methyl methacrylate) technology.

Please note: vebrospeed Quartz can be modified for wet processing and trafficable surface wet areas as **vebro**speed Quartz SR. Coving is available.

1. **vebro** MMA Primer
2. **vebro** Coloured Quartz Blends
3. **vebro** MMA Binder
4. **vebro** Coloured Quartz Blends
5. **vebro** MMA Seal (Clear Silk)



best for wet & dry processing, WC, changing areas & corridors | 4.0 mm | 3 | 1 hr | 2 – 3 hrs

fast cure MMA
deck coatings & demarcation

vebrodeck MMA ID

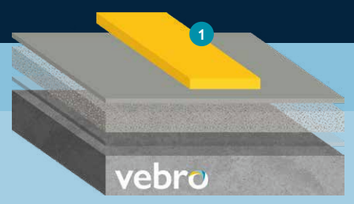
vebrodeck MMA ID is a fast-cure, OS8 certified, methyl-methacrylate decking system ideal for use in wet & dry processing, as well as loading bays.

1. **vebro**deck MMA Metal / Ceramic Primer with **vebro** MMA Filler
2. **vebro** Natural Quartz
3. **vebro**deck MMA Topcoat

Traffic Grey A RAL 7042	Dusty Grey RAL 7037	Basalt Grey RAL 7012	Leaf Green RAL 6002	Golden Yellow RAL 1004	Tomato Red RAL 3013	Gentian Blue RAL 5010

best for wet & dry processing, loading bays | 2.0 mm | 45 mins | 90 mins

vebrodeck MMA Linemarker



vebrodeck MMA Linemarker is a pigmented, roller applied linemarker for use in conjunction with **vebro**deck MMA coating systems.

1. **vebro**deck MMA Linemarker

Traffic Yellow RAL 1023*	Pure White RAL 9010*

best for loading bays | 0.5 mm | ~15 mins | ~30 mins

looking for a different colour?

vebrodeck and **vebro**speed systems are available in custom colours! For more information, visit **vebro**polymers.com

vebropolymers.com

vebro polymers.com

Please note: the information in this guide is subject to change and the most recent technical data should be sought for accurate, up-to-date product or system information. Errors & omissions excepted. The applied colours may differ from the examples shown within this guide. Actual samples should always be viewed before making a final decision, especially if colour accuracy or matching is key to your decision.