

2014



Techno  
Industrial  
Flooring

**PSS**  
Building Solutions.



Building solutions, building future.

# PSS

## Building Solutions.

*a Mazrui Group Company*

## Our experience

Part of a diversified group with a turnover in excess of 1 Billion USD, PSS is the meeting point of technical professionals and application teams of proven experience and reputation in the field of flooring and waterproofing solutions. Our professionals have participated in the design and implementation work of many important flooring and waterproofing projects executed in recent years in GCC and Europe, taking part in forums and national and international associations, maintaining permanent contact with the main centres of technological development of flooring and waterproofing products.

PSS offers a wide range of services based on systems and next-generation products, and we are fully committed to the research and improvement of our procedures. Also engaged in a sustainable future, we are committed to environmentally friendly systems complying with GCC and European environmental regulations.

We offer to our clients a service based on quality, provided with integrity and based on our outstanding professional experience. Our strategic bet is innovation, the implementation of systems of quality and constant research into new fields. Our vocation is to be an effective collaborator from the initial phase of the project to the final installation of products and systems. We want to be your specialist in flooring, waterproofing and special applications, participating as assistants in the diagnosis and design.

## Our services

### Design assistance

We advise our clients on the development of their flooring and waterproofing projects, or any other special requirement to be carried out on site. At the same time we offer custom solutions for the needs of the client to meet their technical and budget requirements.

### Training of prescribers

At the request of our customers, we organize courses for prescribers about flooring and waterproofing solutions, as well as on ad hoc specific requests by the clients.

### Tailor-made solutions

Our specifications service allows you to design specific solutions for both new construction projects and renovations or repairs. We take care of specific design as well as implementation and adaptation of solutions to special works.

### Integral execution

All flooring and waterproofing works that PSS performs are 100% carried out by our own experienced personnel, coordinated and directed by a technical team that monitors and controls the quality and effectiveness of the execution.

## Our Know-how

PSS designs and executes its work with flooring and waterproofing products developed in collaboration with international leading building materials manufacturers. Thanks to an ongoing research process, we develop and tailor each day new products in order to improve the adaptability and efficiency of our solutions.





## Choosing the right solution

Flooring encompasses a wide range of products and applications in a variety of industries. The end user is the key to understanding the needs of any industry and, more specifically, the performance expectations within a particular facility. If an installation meets expectations, it is successful. The difficulty is in determining those expectations.



## Our commitment to the environment

At PSS we bet on the design and application of increasingly environmentally friendly products for flooring and waterproofing. Our program Be Green represents our commitment to a sustainable and secure future. An effort that we hope will contribute to create new lines of research and development in the field of flooring and waterproofing materials.





# Techno

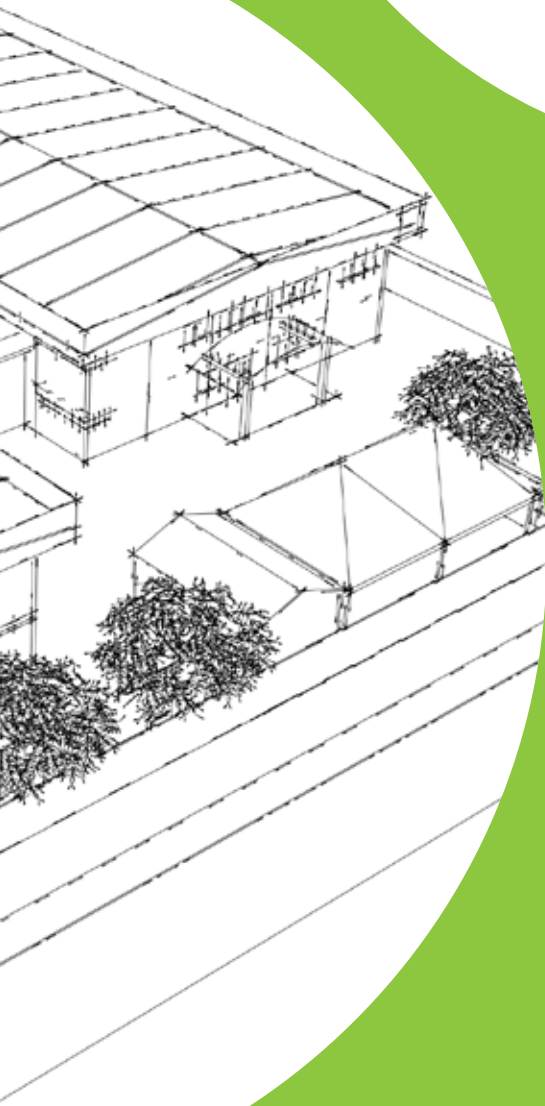
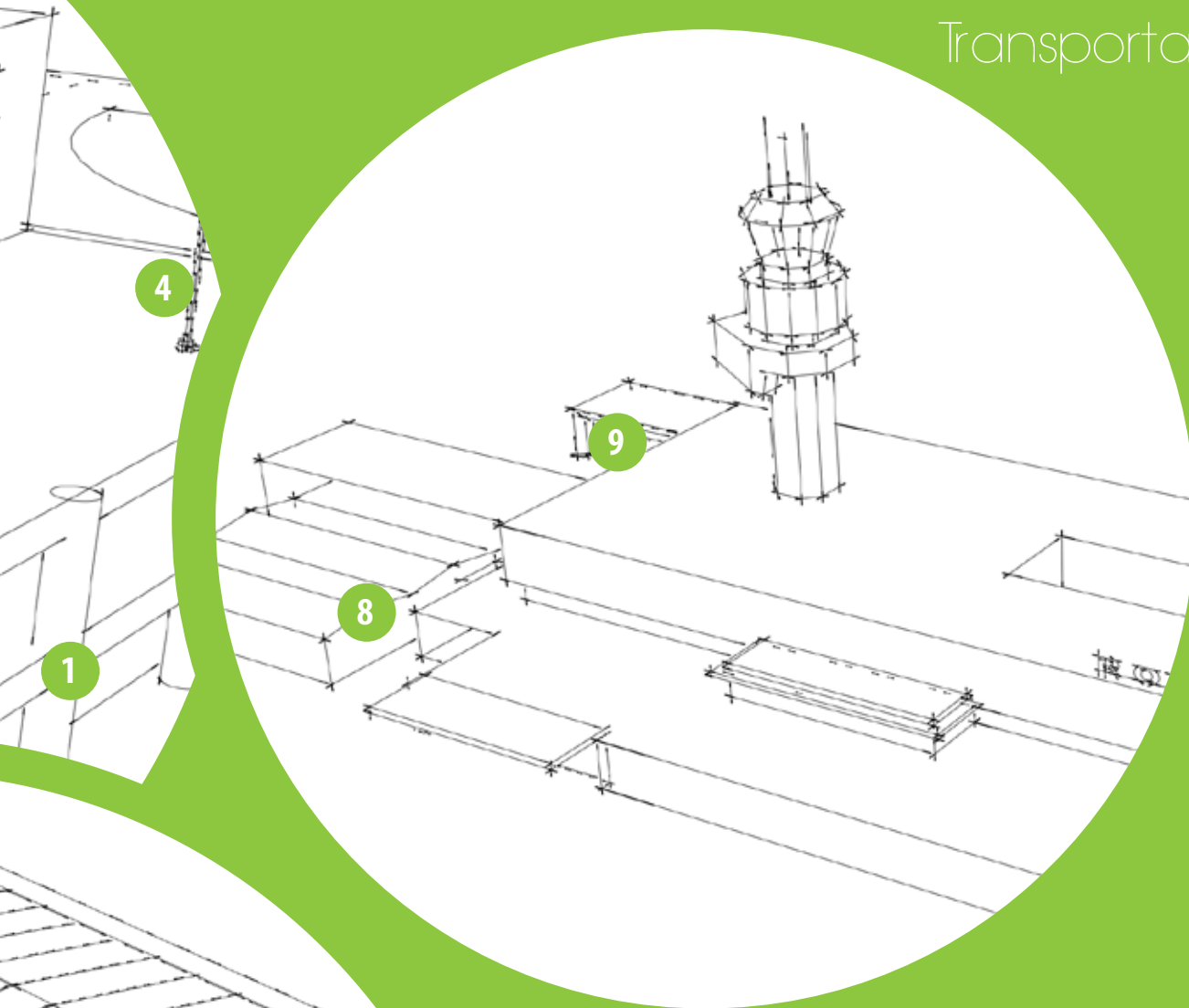
| Industrial Flooring. Areas of application

Residential  
& Commercial

Industry



# Transportation



- 1 Car Park
- 2 Classrooms
- 3 Cafeterias
- 4 Storage Areas
- 5 Loading Docks
- 6 Chemical Storage Areas
- 7 Labs
- 8 Hangers
- 9 Services Areas



**PSS**  
Building Solutions.

PSS TECHNOCOAT E. High traffic resistant epoxy coating, glossy.



PSS MEGAFLOOR. Polished white concrete.

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Building Solutions.









# Surface preparation

Good sub-floor preparation is critical to the successful application of any chemical coating cement screed or resin flooring system. PSS can apply several methods of floor preparation, each with specific objectives and benefits. However it is useful to investigate the different challenges that sub-floor present, and the needs of the flooring systems in relation to those challenges.

# Surface preparation Services

## Coating bonding improvement

The Bond of a coating/flooring system to the sub-floor is a function of the mechanical Key. The better mechanical key achieved, the greater the bond strength of the system to the sub-floor. Sub-floor preparation should produce a recipient surface which has an open, dust free pore structure with no loose surface materials.

## Surface reprofile

The profile of the sub-floor can effect a flooring system in two ways. For thinner high build systems a rough or uneven surface profile will mirror through to the finish of the system. For thicker systems a rough or uneven surface will result in the need for a greater quantity of materials being required with the corresponding increase in cost, without a practical increase in the performance of the system.

## Surface decontamination

Any material that may prevent or weaken the bond of the flooring system directly to the sub-floor must be thoroughly removed as part of the preparation process.

## Saturation decontamination

Any liquid that has penetrated into the pore structure of the concrete sub-floor may have an adverse effect on the initial bond of the system, and subsequently may deteriorate that bond over time. If contamination is suspected, tests should be carried out to determine the nature of the contamination .



# Surface preparation Systems

## PSS Shotblast

### Shot-Blasting-Coating Removal & Surface Texturing

Enclosed shot blasting utilizes abrasive shot, propelled at the sub-floor, dislodging the surface and carrying the surface contamination back to the recycling chamber. Shot blasting is a useful method for the removal of existing coatings and leaves an open textured surface.



## PSS Planning

### Concrete Planing & Milling - Level Reduction & Texturing

This method utilizes steel Tungsten Carbide Tipped flails set onto a rotating drum. The flails cut groves into the concrete or asphalt on impact leaving a highly textured surface. This method is also ideal when a specific surface profile is required i.e to provide traction for cars on parking ramps.



In situation where a significant thickness of concrete needs to be removed (up-to 50mm) due to incorrect floor levels, PSS have available heavy duty ride on planers for large outputs of up to 50 m2 per hour.

## PSS Diamond

### Diamond Grinding - Fine Preparation & Fair Faced Finish

PSS employ techniques using different graded diamond plates, on large planetary driven grinding equipment to grind sub-floors in preparation for the chosen system. This method of preparation is non destructive, leaving a smooth open surface. Three and four headed machines are used where aggressive preparation is required over large areas.

Diamond grinding is also used for removal of thin pre-existing coatings, removal of surface contamination, re-profiling of sub-floors for correction of level and smoothness deficiencies. Diamond plates of varying coarseness are utilized to fine tune the level of finish required. Full dust control is provided by vacuum extraction attached to the grinders.



### Areas of application

	PSS SHOTBLASTING	PSS PLANNING	PSS DIAMOND
Removal of existing coats	●	●	●
Texturize	●	●	
Surface profile		●	●
Surface planning		●	
Removal of surface contamination		●	●
Removal of saturation contamination		●	
Level correction			●
Smoothness deficiencies correction			●







# Industrial Flooring

Choosing the most suitable industrial flooring is a very important decision. To achieve this goal, a team of PSS professionals with recognized experience will advise and support the customers during the design phase of their project.

PSS provides customers with a wide catalogue of flooring products (cement-based, acrylic, epoxy, polyurethane, MMA, etc) carefully selected to obtain the highest levels of quality and durability.

Our systems are adapted to the needs of a wide variety of industries and solicitations. During execution, materials are prepared and applied by our highly qualified teams, using the most accurate machineries and tools. Regular inspections assure the quality of the design and the application on the selected products.

# Industrial Flooring

## Industrial Flooring Systems

### PSS Technocoat

The Technocoat system is based on technical coatings of low thickness (up to 500 microns) on epoxy, polyurethane and MMA bases, guaranteeing in all its versions high chemical and abrasion resistances. Preferred is capable of executing the end to end project from surface preparation to the final coating, guaranteeing an excellent adhesion to all the supports, even in humid conditions.

Technocoat is available in conductive, antimicrobial and anti-slip versions and can be applied indoor and outdoor.

### PSS Technofloor

The Technofloor system is based on polymeric self-leveling mortars of medium and high thickness (up to 5 mm) on epoxy, epoxy-cement, polyurethane and polyurethane-cement bases, guaranteeing in all its versions high chemical and abrasion resistances.

Technocoat is available in conductive, high temperature resistance, antimicrobial and anti-slip versions and can be applied indoor and outdoor.

### PSS Megafloor

Megafloor is a polished concrete system ideal as an industrial floor. Compared with traditional methods for concrete floors, Megafloor offers unbeatable durability. The processed construction concrete has an unlimited lifespan, i.e. the same lifespan of the building. The initial investment is the same, or lower, than for traditional flooring solutions, but the low maintenance cost and the longer life make Megafloor the most lucrative investment option for a floor. The life cycle cost is about 60% less than for any other traditional flooring solutions.

The resistance tests conducted both on floor joints and on concrete slabs on the ground show that Megafloor complies with the SS-EN 61340-5-1 standard for industrial floors in the electronics industry.

Areas of application	PSS TECHNOCOAT E / EA	PSS TECHNOCOAT P / PA	PSS TECHNOCOAT EZ	PSS TECHNOCOAT EFG	PSS TECHNOCOAT MME	PSS TECHNOFLOOR MP	PSS TECHNOFLOOR E	PSS TECHNOFLOOR EML	PSS TECHNOFLOOR P	PSS MEGAFLOOR
Parkings	●	●		●	●	●	●	●	●	●
Storage areas   Loading Docks	●	●		●	●	●	●	●	●	●
Meat Packing   Dairy Facilities   Packaging Plants				●	●	●		●		●
Coolers					●					
Hangers   Metro stations   Naval Stations   Prisons	●	●			●	●	●	●	●	●
Hospital operating rooms   Kitchens   Labs				●		●		●		
Chemical Storage Areas   Chemical Linings			●		●					●
Classrooms   Cafeterias   Hallways   Locker Rooms	●	●		●	●	●	●	●	●	●
INDOOR USE	●	●	●	●	●	●	●	●	●	●
OUTDOOR USE		●			●	●			●	●



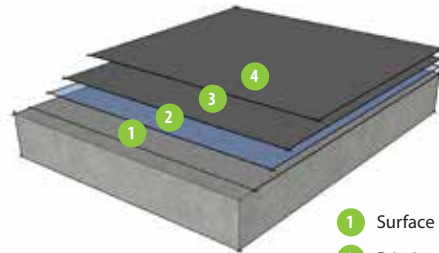
# Industrial Flooring

## Industrial Flooring Systems

### PSS Technocoat E

#### Epoxi coating

PSS TECHNOCOAT E, floor protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 2-component epoxy resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. First Coating layer application with a 2-component colored epoxy, tough hard resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. Second Coating layer application with a 2-component colored epoxy, tough hard resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>.

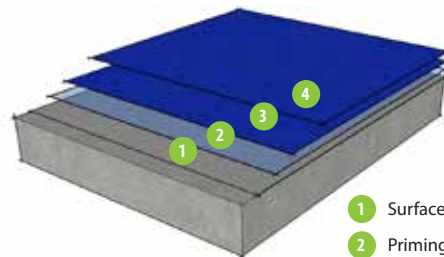


- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer
- 4 Second Coat Layer

### PSS Technocoat EA

#### Antiskid Epoxi coating

PSS TECHNOCOAT EA, antiskid floor protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 2-component epoxy resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. First Coating layer application with a 2-component colored epoxy, tough hard resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>, sprinkled with clean dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m<sup>2</sup>). Second Coating layer application with a 2-component colored epoxy, tough hard resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>.

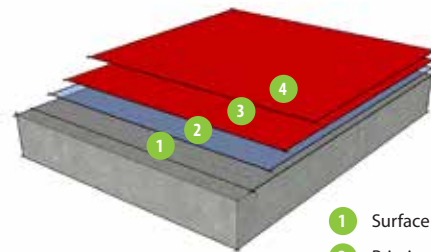


- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer + quartz sand
- 4 Second Coat Layer

### PSS Technocoat P

#### Polyurethane coating

PSS TECHNOCOAT P, floor UV resistant protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 1 component polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>. First Coating layer application with a 2-component UV resistant polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>. Second Coating layer application with a 2-component UV resistant polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>.

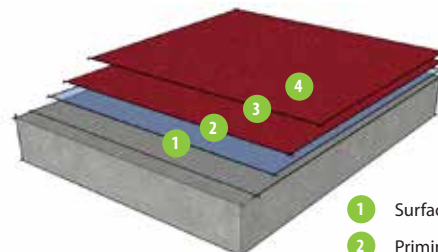


- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer
- 4 Second Coat Layer

### PSS Technocoat PA

#### Antiskid Polyurethane coating

PSS TECHNOCOAT PA, antiskid & UV resistant floor protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 1 component polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>. First Coating layer application with a 2-component UV resistant polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>, sprinkled with clean dry quartz sand Ø 0.4 - 0.8 mm (approx. 0.5 kg/m<sup>2</sup>). Second Coating layer application with a 2-component UV resistant polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>.



- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer + quartz sand
- 4 Second Coat Layer

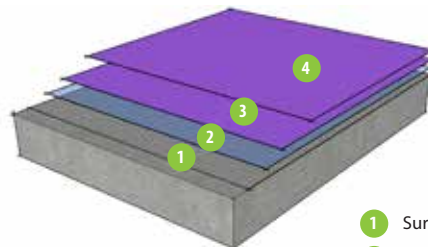
# Industrial Flooring

## Industrial Flooring Systems

### PSS Technocoat EZ

#### High chemical resistance epoxy coating

PSS TECHNOCOAT EZ, high chemical resistant floor protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 2-component epoxy resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. First Coating layer application with a 2- component colored epoxy, high chemical resistant resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. Second Coating layer application with a 2- component colored epoxy, high chemical resistant resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>.

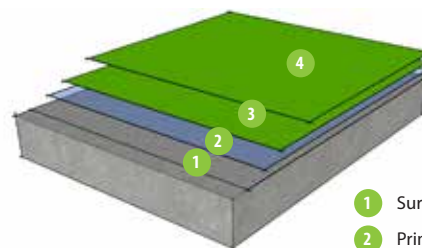


- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer
- 4 Second Coat Layer

### PSS Technocoat EFG

#### Food grade Epoxy coating

PSS TECHNOCOAT EFG, high chemical resistant floor protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 2-component epoxy resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. First Coating layer application with a 2- component colored epoxy, food grade resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. Second Coating layer application with a 2- component colored epoxy, food grade resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>.

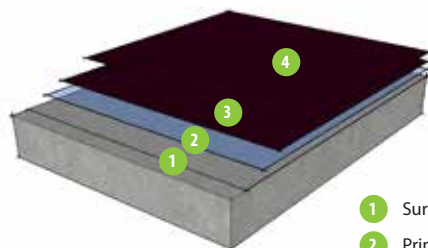


- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer
- 4 Second Coat Layer

### PSS Technocoat MMA

#### Methacrylate coating

PSS TECHNOCOAT MMA, ultra fast curing protective coating system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. First Coating layer application with a 2- component colored Methacrylate resin, with a consumption approx. 150 g/m<sup>2</sup>. Second Coating layer application with a 2- component colored Methacrylate resin, with a consumption approx. 150 g/m<sup>2</sup>.

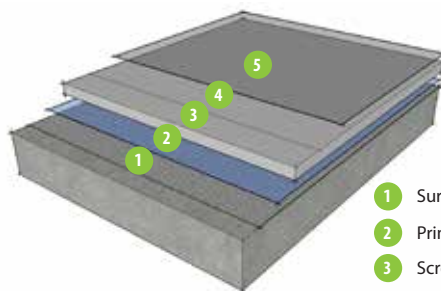


- 1 Surface preparation
- 2 Priming layer
- 3 First Coat Layer
- 4 Second Coat Layer

### PSS Technofloor MP

#### Polished mortar cementitious floor

PSS TECHNOFLOOR MP, polished self leveling special mortar screed of 10-20 mm thick supply and apply according to the following procedure: Application of a priming layer onto the prepared surface with a 2-component epoxy resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. After a minimum of 20 days curing, surface refining using a slightly finer metal bonded diamond (120 grit). Polishing with 3 different grades (800,1600 and 3000 grit) of specially designed resin bonded diamond tools, including dust extraction system. Application of Stain Resistant Sealer to eliminate oil and liquid penetration.



- 1 Surface preparation
- 2 Priming layer
- 3 Screed application
- 4 Polishing
- 5 Sealing

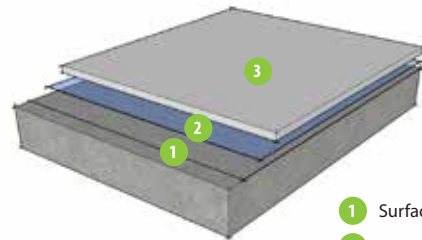
# Industrial Flooring

## Industrial Flooring Systems

### PSS Technofloor E

#### Selfleveling epoxy floor

PSS TECHNOFLOOR E, epoxy screed system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 2-component epoxy resin, flash point > 90°C, free of nonylphenol, with a consumption approx. 150 g/m<sup>2</sup>. Application of a epoxy screed layer onto the primed surface with a 2-component colored epoxy resin filled with clean dry quartz sand in a mix ratio of 1:5, with a consumption of 8-10 Kg/m<sup>2</sup>, depending on the substrate. Total thickness, approx. 3 mm.

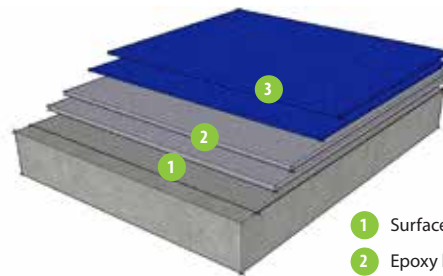


- 1 Surface preparation
- 2 Priming layer
- 3 Epoxy screed

### PSS Technofloor EML

#### High resistance multilayer epoxy floor

PSS TECHNOFLOOR EML, epoxy screed system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of two layers of a base epoxy screed onto the primed surface with a 2-component colorless epoxy resin filled with clean dry quartz sand (Ø 0.8 - 1.2 mm) in a mix ratio of 1:10, with a total consumption of 6-8 Kg/m<sup>2</sup>, depending on the substrate. Application of two layers of a finishing epoxy screed onto the primed surface with a 2-component colored epoxy resin filled with clean dry quartz sand (Ø 0.4 - 0.8 mm) in a mix ratio of 1:5, with a total consumption of 4-6 Kg/m<sup>2</sup>. Total thickness, approx 4-5 mm.

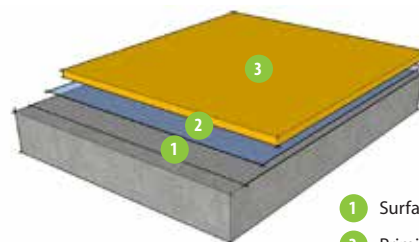


- 1 Surface preparation
- 2 Epoxy base screed (2 layers)
- 3 Epoxy base finish (2 layers)

### PSS Technofloor P

#### Selfleveling polyurethane floor

PSS TECHNOFLOOR P, polyurethane screed system supply and apply according with the following procedure: Substrate preparation by removal of the existing unevenness by planning, e.g PSS Planning and dust-free surface treatment, e.g. PSS Shotblast or PSS Grind. Pull off strength: 1.5 N/mm<sup>2</sup>, maximum moisture content 8 % by weight. Application of a priming layer onto the prepared surface with a 1 component polyurethane resin, with a consumption approx. 150 g/m<sup>2</sup>. Application of a polyurethane screed layer onto the primed surface with a 2-component colored polyurethane resin filled with clean dry quartz sand in a mix ratio of 1:4, with a consumption of 8-10 Kg/m<sup>2</sup>, depending on the substrate. Total thickness, approx. 3 mm.

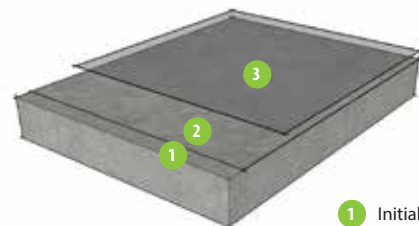


- 1 Surface preparation
- 2 Priming layer
- 3 Polyurethane screed

### PSS Megafloor

#### Polished concrete

PSS MEGAFLOOR polished concrete finish according to the following procedure: On a existing concrete slab, initial preparation to remove the laitance and correct irregularities & undulations using the metal bond range of diamonds (30/70/ grit). Surface refining using a slightly finer metal bonded diamond (120 grit). Polishing with 3 different grades (800,1600 and 3000 grit) of specially designed resin bonded diamond tools, including dust extraction system. Application of Stain Resistant Sealer to eliminate oil and liquid penetration and provide corrosion protection to reinforcements. Included, where necessary, floor treatment with Densifier to increase the strength of the concrete.



- 1 Initial preparation
- 2 Polishing
- 3 Sealant



# A successful flooring Project

A lot of people have asked us the question, "How can I be sure I am getting a good floor installation? One that lasts, looks good for a long time without staining and is not affected by chemicals." The quality of flooring installations appears to be a universal problem.

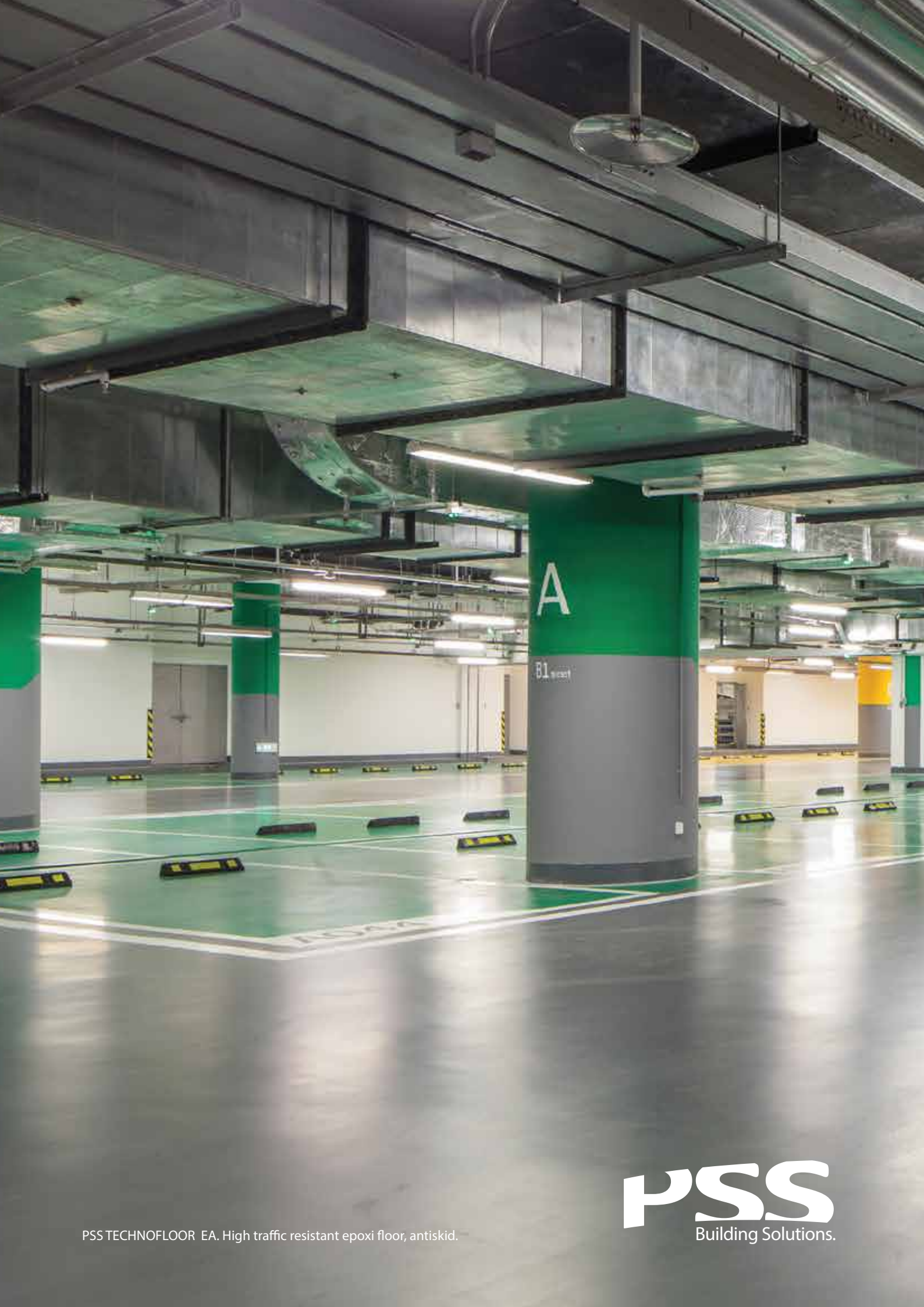
Many industries experience an annual repair-or-replace cycle in order to maintain functional flooring systems. You can escape this cycle and purchase a "good" installation but it requires a commitment and focus on the part of a knowledgeable team. It requires an understanding of the issues and some forethought of what the end users requirements are. It requires a different new attitude, which recognizes that flooring is not a commodity purchase.

Flooring encompasses a wide range of products and applications in a variety of industries. The end user is the key to understanding the needs of any industry and, more specifically, the performance expectations within a particular facility. If an installation meets expectations, it is successful. The difficulty is in determining those expectations.



## Before to decide, Some important questions

- 1 Does the facility need drains and where?
- 2 Who is going to be responsible for installing the slope and how is it to be accomplished?
- 3 What level of chemical resistance do you require and in what areas of the facility is it required?
- 4 How much skid resistance if any do you need?
- 5 Is thermal movement a concern?
- 6 What are the ventilation requirements for the flooring system during installation and can they be accomplished?
- 7 Who tests for moisture in the slab? Do not accept assumptions that moisture will not be a problem.
- 8 What kind of traffic would you expect and in what pattern do you expect it?
- 9 How are you going to treat expansion joints and cracks and how do you design the flooring system to accommodate load transfer at the joints.
- 10 Are aesthetics important?
- 11 Will the flooring system survive your cleaning regime or do you need to change your protocol?
- 12 How long do you expect the flooring system to last?



PSS TECHNOFLOOR EA. High traffic resistant epoxi floor, antiskid.

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