



**NIPPON  
PAINT**

# FLOORING SOLUTIONS

**DURABLE & LONG-LASTING  
FLOORING PROTECTION**

Protect your flooring with  
**PROFESSIONAL**  
TOTAL COATING &  
CONSTRUCTION SOLUTIONS



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## ABOUT NIPPON PAINT MALAYSIA

At Nippon Paint, we pride ourselves as the coating experts with innovations that has shaped the lives of millions, building better, brighter and beautiful community with full of colour and opportunities. It all stems from breakthrough researches, meticulously developed by our scientist and chemist at our world leading facilities. With more than 10 years of experience and technology in flooring and coating solutions, we are able to offer Total Coating & Construction Solutions to our customers, providing excellent flooring protection for a myriad of industries.

As the trusted brand for more than 50 years, we have a dedicated and proactive sales force and Color Consultant Team ready to attend to all your enquiries. Our professional technical consultants are ready for any technical assistance needed in pre, during and post construction phases.

**“ Innovation is at its peak when it is harnessed for a singular aim – the smile on our customers’ face, ”**  
*- Yaw Seng Heng, Group MD, Nippon Paint (M) Sdn Bhd -*

### NIPPON PAINT TOTAL COATING & CONSTRUCTION SOLUTIONS



ARCHITECTURAL COATINGS



PROTECTIVE COATINGS



WATERPROOFING SOLUTIONS



FLOORING SOLUTIONS



SEALANT, ADHESIVE & FILLER SOLUTIONS



DRY MIX SOLUTIONS

### OUR PROFESSIONAL SERVICES



PROJECT SPECIFICATION CONSULTATION



DETAIL DRAWINGS CONSULTATION



JOB-SITE TECHNICAL SUPPORTS



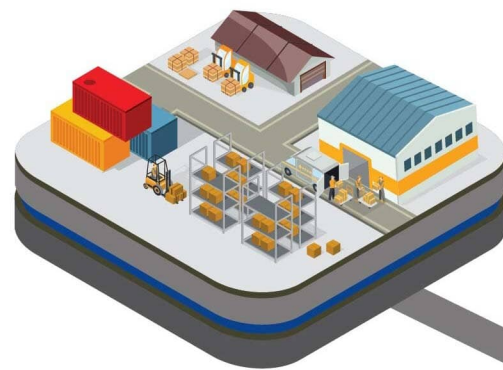
FORWARD COATINGS EXPO SEMINARS & TRAINING



# NIPPON PAINT FLOORING SOLUTIONS OVERVIEW

At Nippon Paint, we don't believe in just one solution for all sectors. As the Total Coating & Construction Solutions provider, we understand that every floor has different needs and challenges unique to their respective projects and as a result, we pride ourselves in our ability to provide comprehensive solutions tailored to your business.

Our partnership begins with a thorough consultation and assessment of your project needs - impact resistance, wear resistance, chemical resistance, special feature, aesthetic needs, quick and efficient installation. With our products, we can customize to meet your technical requirement.



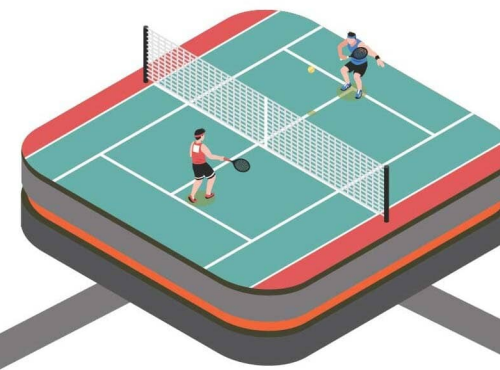
## FLOORSHIELD INDUSTRIAL FLOORING

The multi-purpose floor coating from water-based, solvent-free epoxy, solvent-based polyurethane (PU), PU cementitious screed and electrostatic discharge (ESD) suited for light to heavy duty performance. With excellent abrasion and chemical resistance, and also various specialized properties, our flooring solutions are able to cover various industries from food safe to warehouses.



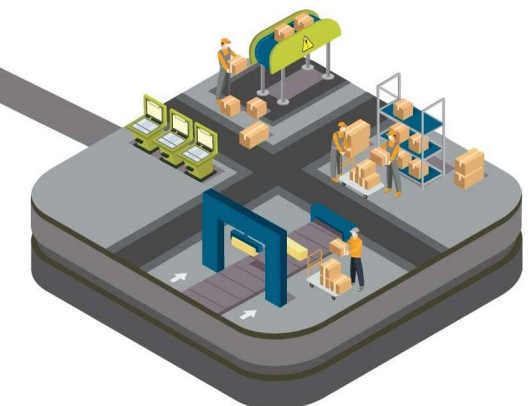
## CAR PARK DECK SYSTEM CAR PARK FLOORING

Specially designed floor coating system for all your car park needs. The epoxy build-up system with many different customization to address the special needs of exposed, intermediate and basement car park.



## FLOORSPORTS SPORTS COURT FLOORING

Our International Tennis Federation (ITF) certified floor coating system that is suitable for your sports courts and training trails. Our 1K Epoxy Hybrid is able to provide abrasion resistance with a wide range of colours for your selection. By incorporating our non-skid system, it provides the user with anti-slip properties for improved safety.



## FLOOR HARDENER

Dry shake floor hardener with blends of cement, special hard aggregates, pigments and workability improvers that is applied over freshly place concrete to create a monolithic floor system, providing a stronger concrete surface.

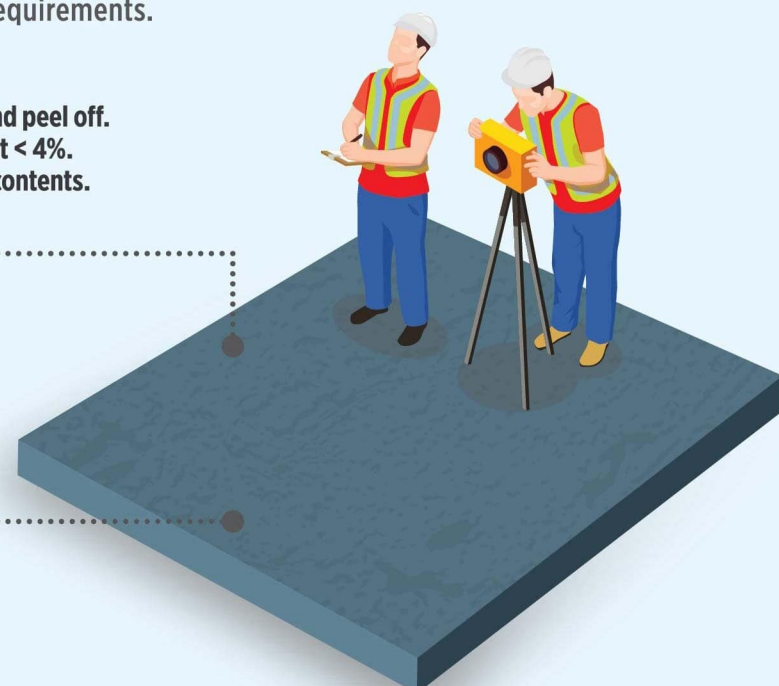


# FLOOR SURFACE REQUIREMENT:

Before applying any form of coating on to any type of the floor, the floor surface has to be prepared thoroughly to ensure that the coatings perform as intended. An ill-prepared surface could lead to deformation of the surface coating, early signs of cracking, or even water leakage. There are few common methods to prepare a surface before applying the coating on it. However, specific coatings and conditions will have their own respective surface preparations.

## SUBSTRATE REQUIREMENT:

Before applying any floor coating, the condition of the substrate, specifically concrete has to meet the surface requirements.



### 1 MOISTURE CONTENT

Uprising moisture can cause floor coatings to crack and peel off.  
Moisture content level of concrete substrate to be kept < 4%.  
Moisture barrier will be required for higher moisture contents.

### 0 COMPRESSIVE STRENGTH

Minimum Compressive Strength: 25 N/mm<sup>2</sup>

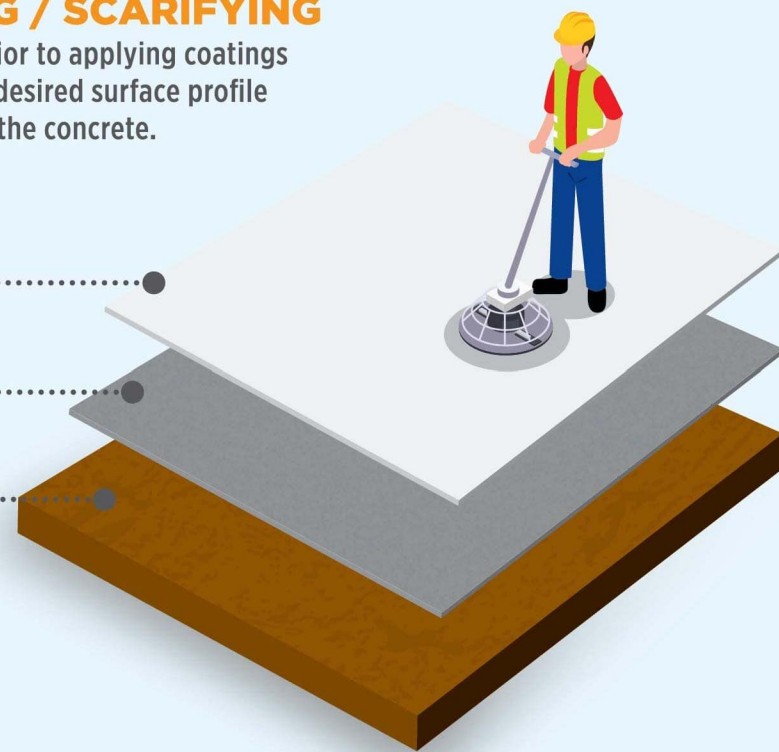
### TENSILE ADHESION STRENGTH

Minimum Tensile Adhesion Strength: 1.5 N/mm<sup>2</sup>

## SURFACE PREPARATION:

### GRINDING / SHOT BLASTING / SCARIFYING

It is important to prepare concrete surfaces prior to applying coatings on top. Preparing the concrete is to achieve a desired surface profile for improved adhesion of the floor coating on the concrete.



### 2 GRIND / SHOT BLAST / SCARIFY TO DESIRED CONCRETE SURFACE PROFILE

### 1 REMOVE DEBRIS AND DUST FROM SITE

### 0 PREPARED AND TREATED CONCRETE

# CONCRETE SURFACE PROFILE SELECTION GUIDE

Concrete Surface Profiles (CSP) are divided into various categories classified under the technical guideline **No.310.2R** by the **International Concrete Repair Institute (ICRI)**. The type of CSP is decided by the thickness of the flooring system selected.

SYSTEM THICKNESS (MM)	CSP2	CSP3	CSP4	CSP5	CSP6
0 - 0.075	✓				
0.100 - 0.250	✓	✓			
0.250 - 1.000		✓	✓	✓	
1.250 - 3.175			✓	✓	✓
3.175 - 6.350				✓	✓
> 6.350				✓	✓

NOTE: These CSP serves as a guideline and reference only and may vary from case to case.



# NIPPON PAINT FLOOR COATING SYSTEM GUIDE

SYSTEMS	CSP2	CSP3	CSP4	CSP5	CSP6
<b>FLOORSHIELD</b> SOLVENT FREE EPOXY		✓	✓	✓	
SOLVENT FREE SELF LEVELLING			✓	✓	✓
SOLVENT FREE EPOXY (MOISTURE BARRIER)				✓	✓
SOLVENT FREE SELF LEVELLING (MOISTURE BARRIER)				✓	✓
SOLVENT FREE EPOXY PU		✓	✓	✓	
SOLVENT FREE EPOXY PU (MOISTURE BARRIER)				✓	✓
UCREED MD				✓	✓
UCREED HD				✓	✓
ESD (DISSIPATIVE)*		✓	✓	✓	
ESD (CONDUCTIVE)*		✓	✓	✓	
CAR PARK DECK ID (INTERMEDIATE DECK)		✓	✓		
CAR PARK DECK BD (BASEMENT DECK)				✓	✓
CAR PARK DECK ED (EXPOSED DECK)		✓	✓		
AQUA EPOXY	✓	✓			

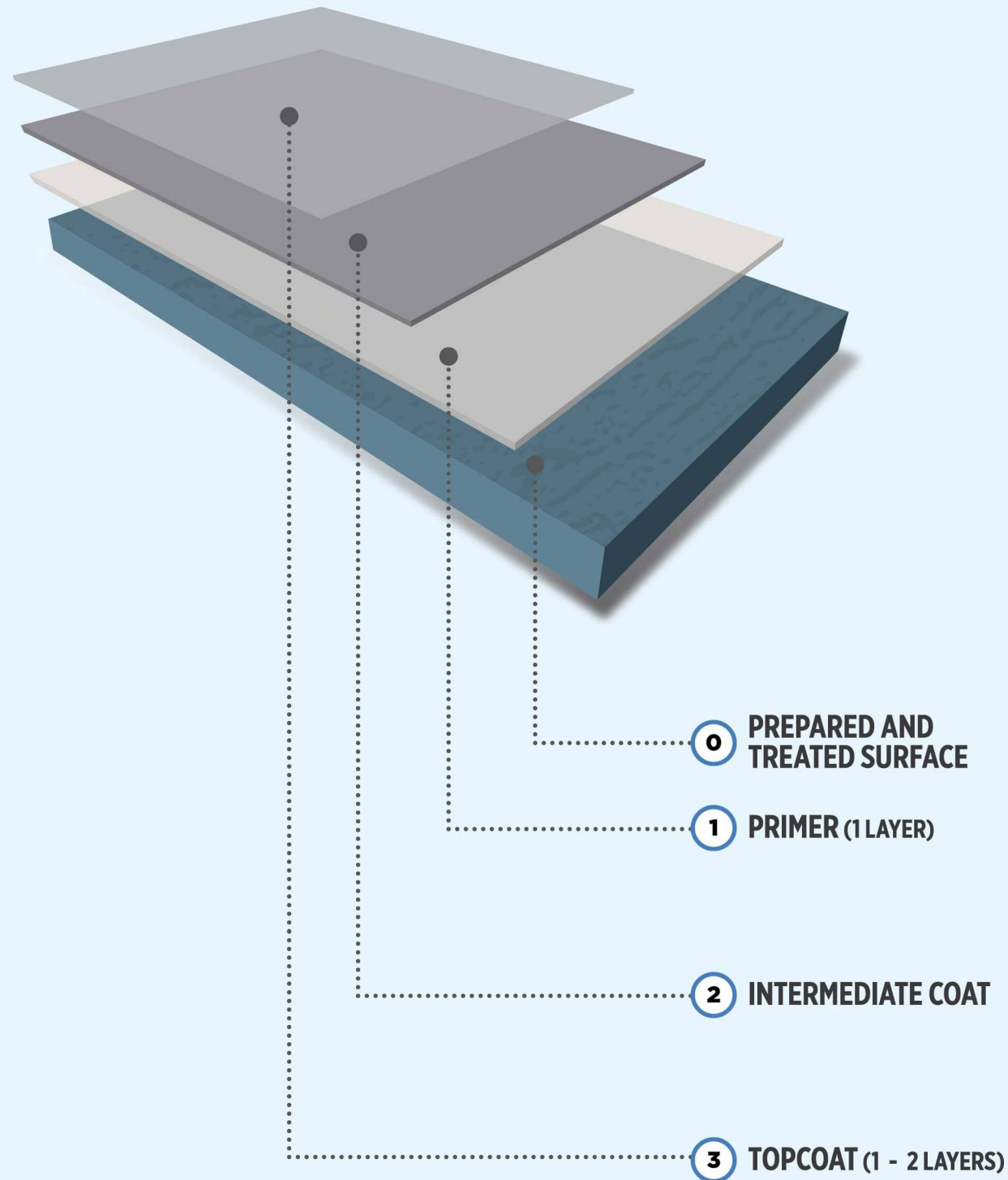
NOTE: \*Concrete surface profile may vary for type of ESD system used.



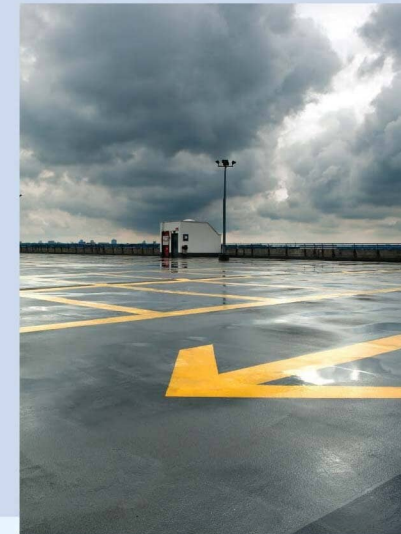
# FLOOR COATING SYSTEMS:

Our standard floor coating system is our most basic flooring system applicable in both exterior and interior. This standard coating system provides a multitude of properties from self-levelling to UV protection. All of the standard coating systems provide a smooth finishing when completely cured.

## STANDARD SYSTEM



With our customizable flooring systems, our flooring systems can accommodate various situations based on your needs just by changing the intermediate coat



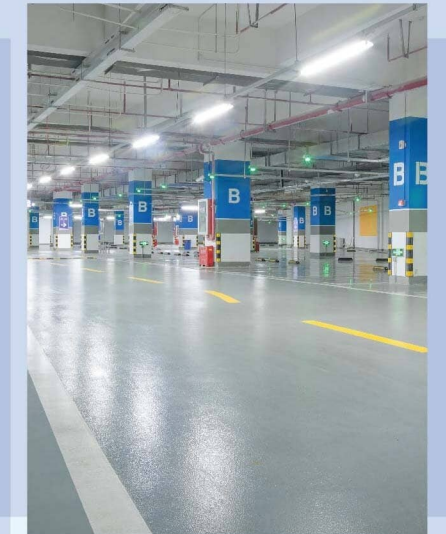
### WATERPROOFING SYSTEMS

Waterproofing systems are suitable for exposed areas to help prevent cracks on the surface while providing waterproofing protection.



### MOISTURE BARRIER SYSTEMS

For basement and/or direct ground contact where the moisture content is more than 4%, we provide epoxy mortar systems that acts as a **Moisture Barrier**.



### ANTI-SKID FLOORING SYSTEMS

Our coating systems can also be imparted with anti-skid properties with the **Orange Peel System** or **Broadcast Sand System** for Light-Duty and Medium-Duty.

## SMOOTH FINISHING

## ANTI-SKID FINISHING

EXPOSED AREAS

BASEMENT / DIRECT GROUND CONTACT

MEDIUM-DUTY

LIGHT-DUTY

WATERPROOFING SYSTEM

MOISTURE BARRIER SYSTEM

BROADCAST SAND SYSTEM

ORANGE PEEL SYSTEM

PU ANTI-SKID SYSTEM

0 PREPARED & WATERPROOF TREATED SURFACE

PREPARED & TREATED SURFACE

1 PRIMER

2 N/A

FLOORSHIELD SF EPOXY MORTAR + FLOORSHIELD SF EPOXY OP TEXTURED FINISH

FLOORSHIELD SF EPOXY BODY COAT + QUARTZ SCATCY 36 (30X60) MEDIUM

FLOORSHIELD SF EPOXY OP TEXTURED FINISH

N/A

3 TOPCOAT

FLOORSHIELD PU ANTI-SKID



# FLOORSHIELD | INDUSTRIAL FLOORING

## PRODUCTION / LOGISTICS / CHEMICAL PLANTS



Production plants and logistic warehouses experience a multitude of stresses on their surfaces due to the nature of their work. The main stresses are the mechanical stress from the high usage of heavy machineries i.e., forklifts. Besides mechanical stresses, chemical stress and thermal stress are also a factor that will affect the surface in these locations.

**Nippon Paint FloorShield** offers multiple flooring solutions that are engineered to help withstand these extreme environments. For example, our **FloorShield Solvent Free Epoxy** system offers excellent abrasion resistance to counter the mechanical stresses from forklifts, and chemical resistance to protect the floor from chemical attacks due to spillage.

Alternatively, **Nippon Paint FloorShield** range also offers self-levelling flooring systems for a seamless and smooth appearance. These systems are suitable as it prolongs the life span of the floor, thus, minimising the need for frequent maintenance or replacement.

### FLOORSHIELD Solvent Free Epoxy System

High Performance Solvent Free Epoxy Coating System



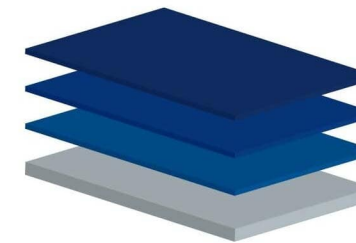
Abrasion Resistance



Chemical Resistance



Easy to Apply



- 3 FloorShield SF Epoxy Finish
- 2 FloorShield SF Epoxy Finish
- 1 FloorShield SF Epoxy Primer
- 0 Prepared and Treated Concrete



Also Available:

For Basement / Direct Ground Contact (moisture content >4%)  
**MOISTURE BARRIER SYSTEM**

For Anti-Skid Purpose  
**ORANGE PEEL SYSTEM**  
**BROADCAST SAND SYSTEM**

### FLOORSHIELD Self Levelling Epoxy System

Self-Smoothing Solvent Free Epoxy Coating System



High Gloss



Easy to Clean



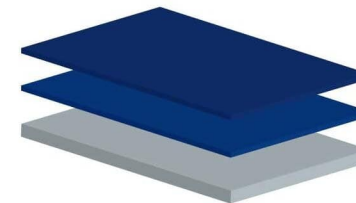
Impact Resistance



Chemical Resistance



Self-Smoothing



- 2 FloorShield SL1 / SL2 Epoxy Finish
- 1 FloorShield SF Epoxy Primer
- 0 Prepared and Treated Concrete



Also Available:

For Basement / Direct Ground Contact (moisture content >4%)  
**MOISTURE BARRIER SYSTEM**

	MOISTURE BARRIER SYSTEM			
	FLOORSHIELD Solvent Free Epoxy System	FLOORSHIELD Solvent Free Self Levelling Epoxy System	FLOORSHIELD Solvent Free Epoxy System	FLOORSHIELD Solvent Free Self Levelling Epoxy System
<b>SYSTEMS</b>				
NO. OF COATS*	3	2	5	4
TOTAL THICKNESS (MM)*	0.5 - 0.6	1.0 - 2.0	4.5 - 5.0	5.5 - 6.0
ABRASION RESISTANCE (ASTM D4060)	< 80mg / 1000 cycles	< 80mg / 1000 cycles	< 80mg / 1000 cycles	< 80mg / 1000 cycles
SHORE D HARDNESS (ASTM D2240)	> 80	> 75	> 80	> 75
COMPRESSIVE STRENGTH (ASTM C579)	> 85N/mm <sup>2</sup>	> 85N/mm <sup>2</sup>	> 40N/mm <sup>2</sup>	> 40N/mm <sup>2</sup>
FLEXURAL STRENGTH (ASTM C580)	> 40MPa	> 40MPa	> 20MPa	> 20MPa
ADHESION STRENGTH (ASTM D4541)	> 1.5N/mm <sup>2</sup>	> 1.5N/mm <sup>2</sup>	> 1.5N/mm <sup>2</sup>	> 1.5N/mm <sup>2</sup>

NOTE: All coating systems represented here are recommendations only and may vary from case to case.  
\*Subjected to type of system or finishing.



# FLOORSHIELD | INDUSTRIAL FLOORING

## AUTOMOTIVE 3S / 4S CENTRES



In the current times, vehicles of all shapes and sizes exist on the roads. To maintain all these vehicles, 3S and 4S centres are rapidly being developed to accommodate the number of vehicles. In the automotive industry, these 3S centres are the sales, service and spare parts service centres while the 4S centres have an additional paint service in their operations.

These areas experience high mechanical stresses on the floors due to the high vehicular traffic. Furthermore, the area is subjected to the many oils and lubricants used. This could damage the floors which could cause injuries to the individuals in the area.

These centres need to be protected from the mechanical and chemical stresses due to the work environment. **Nippon Paint FloorShield** offers a variety of solutions that can provide excellent abrasion and chemical resistance to protect the floors under these conditions.



### FLOORSHIELD Epoxy PU System

UV-Resistance PU Flooring Coating System



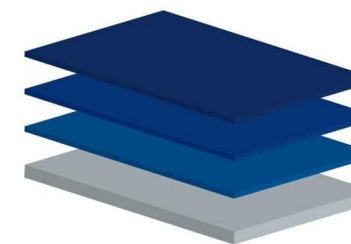
Abrasion Resistance



Chemical Resistance



UV Protection



- 3 FloorShield SB PU Finish
- 2 FloorShield SF Epoxy Finish
- 1 FloorShield SF Epoxy Primer
- 0 Prepared and Treated Concrete



Also Available:

For Basement / Direct Ground Contact (moisture content >4%)  
**MOISTURE BARRIER SYSTEM**

For Anti-Skid Purpose  
**ORANGE PEEL SYSTEM**  
**BROADCAST SAND SYSTEM**

SYSTEMS	FLOORSHIELD Epoxy PU System	MOISTURE BARRIER SYSTEM
	FLOORSHIELD Epoxy PU System	FLOORSHIELD Epoxy PU System
NO. OF COATS*	3	5
TOTAL THICKNESS (MM)*	0.5 - 0.6	5.0 - 5.5
ABRASION RESISTANCE (ASTM D4060)	< 80mg / 1000 cycles	< 80mg / 1000 cycles
SHORE D HARDNESS (ASTM D2240)	> 80	> 80
COMPRESSIVE STRENGTH (ASTM C579)	85N/mm <sup>2</sup>	> 40N/mm <sup>2</sup>
FLEXURAL STRENGTH (ASTM C580)	40MPa	> 20MPa
ADHESION STRENGTH (ASTM D4541)	> 1.5N/mm <sup>2</sup>	> 1.5N/mm <sup>2</sup>
UV LIGHT RESISTANCE	Excellent (Non-Yellowing)	Excellent (Non-Yellowing)

NOTE: All coating systems represented here are recommendations only and may vary from case to case.  
\*Subjected to type of system or finishing.



# FLOORSHIELD UCREEED | FOOD SAFE FLOORING

## FOOD PROCESSING / COLD STORAGE



Many food industries such as food processing, packing and cold rooms require surfaces where hygiene and cleanliness are the utmost importance. Due to the constant high temperature sterilisation or low temperature environments, the flooring used will need to meet many requirements.

With our **FloorShield Ucreed** systems, we are able to provide durable and HACCP food safe certified flooring solutions for all your hygienic purposes. Our systems are suited for both medium and heavy duty environments while withstanding thermal shock, chemicals, impact and abrasion.

### FLOORSHIELD Ucreed MD

Medium to Heavy-duty, Self-smoothing, Hygienic PU Water-Based Cementitious System



Food Safe



Thermal Shock Resistance



Abrasion & Impact Resistance



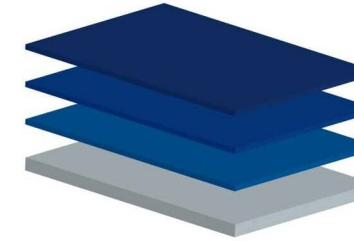
Chemical Resistance



Antimicrobial



Self-Smoothing



- 3 FloorShield Ucreed MD
- 2 FloorShield Ucreed MD (Scratch Coat)
- 1 AquaPrime Epoxy Primer (Red)
- 0 Prepared and Treated Concrete

### FLOORSHIELD Ucreed HD

Heavy-duty, Hygienic, Anti-Slip PU Cementitious System



Food Safe



Thermal Shock Resistance



Abrasion & Impact Resistance



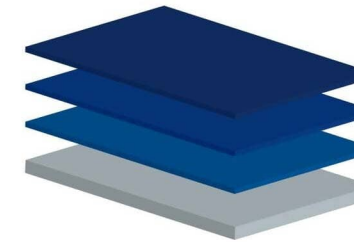
Chemical Resistance



Antimicrobial



Self-Smoothing



- 3 FloorShield Ucreed HD
- 2 FloorShield Ucreed MD (Scratch Coat)
- 1 AquaPrime Epoxy Primer (Red)
- 0 Prepared and Treated Concrete

SYSTEMS	FLOORSHIELD Ucreed MD	FLOORSHIELD Ucreed HD
NO. OF COATS*	4	4
TOTAL THICKNESS (MM)*	4 - 7	7 - 13
ABRASION RESISTANCE (ASTM D4060)	38mg / 1000 cycles	83mg / 1000 cycles
SHORE D HARDNESS (ASTM D2240)	> 80	> 82
COMPRESSIVE STRENGTH (BS 6319)	> 50MPa	> 50MPa
FLEXURAL STRENGTH (ASTM C348)	> 20MPa	> 20MPa
ADHESION TO CONCRETE (ASTM C158)	> 1.5MPa	> 1.5MPa
SERVICE TEMPERATURE	5°C to 80°C (3mm) -5°C to 100°C (6mm)	-15°C to 130°C (6 - 9mm) -40°C to 150°C (9 - 12mm)

NOTE: All coating systems represented here are recommendations only and may vary from case to case.  
\*Subjected to type of system or finishing.



# FLOORSHIELD ESD | ANTI-STATIC FLOORING CLEAN ROOMS / ELECTRONIC PLANTS



Certain areas are highly sensitive to static due to the nature of the industries. Some industries such as semiconductor plants, pharmaceutical plants, and clean rooms requires static to be discharged safely to prevent damage to equipment or finished products. Some areas require conductive static discharge whereby static discharges faster while some may need dissipative static discharge for slower static discharge.

To safely discharge static to the floor, **Nippon Paint FloorShield ESD** floor systems are suitable to be used for these industries. Our flooring systems are able provide hygienic anti-static solutions for both conductive and dissipative.

## FLOORSHIELD ESD (Dissipative)

Anti-Static Dissipative ( $10^6\Omega$  to  $10^9\Omega$ )  
Floor Coating System



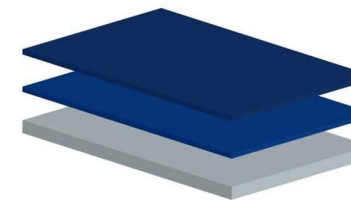
Electrostatic  
Discharge



Chemical  
Resistance



Hygienic &  
Easy to Clean



- 2 FloorShield ESD SF Epoxy Finish
- 1 Earthing Kit / 1 pc every 100m<sup>2</sup>
- 0 Underlayment / Scratch Coat / Primer

**Also Available:**  
Various Finishing Coats  
**ESD SL EPOXY FINISH & ESD UCREEED MD\*\***  
\*\*ESD Ucreed™ MD system requires scratch coat before application.  
For Exposed UV Areas  
**ESD PU FINISH**  
For Basement / Direct Ground Contact  
(moisture content >4%)  
**MOISTURE BARRIER SYSTEM**

## FLOORSHIELD ESD (Conductive)

Anti-Static Conductive ( $10^4\Omega$  to  $10^6\Omega$ )  
Floor Coating System



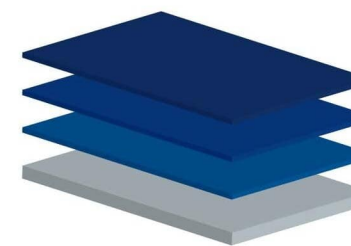
Fast  
Electrostatic  
Discharge



Chemical  
Resistance



Hygienic &  
Easy to Clean



- 3 FloorShield ESD SF Epoxy Finish
- 2 FloorShield ESD Primer WB
- 1 Earthing Kit / 1 pc every 100m<sup>2</sup>
- 0 Underlayment / Scratch Coat / Primer

**Also Available:**  
Various Finishing Coats  
**ESD SL EPOXY FINISH & ESD UCREEED MD\*\***  
\*\*ESD Ucreed™ MD system requires scratch coat before application.  
For Exposed UV Areas  
**ESD PU FINISH**  
For Basement / Direct Ground Contact  
(moisture content >4%)  
**MOISTURE BARRIER SYSTEM**

SYSTEMS	FLOORSHIELD ESD (Dissipative)	FLOORSHIELD ESD (Conductive)
NO. OF COATS*	3	3
TOTAL THICKNESS (MM)*	0.5 - 0.6	0.5 - 0.6
SURFACE TO GROUND & SURFACE TO SURFACE (EARTH) RG SPEC (BS2050)	$1 \times 10^6$ ohm to $9 \times 10^9$ ohm	$1 \times 10^4$ ohm to $9 \times 10^6$ ohm
ANSI / ESD S-20.20-2007	<b>Compliant</b>	<b>Compliant</b>
DECAY TIME THROUGH HUMAN BODY	< 20s	< 20s
HUMAN BODY VOLTAGE	< 100 volts	< 100 volts
ABRASION RESISTANCE* (ASTM D4060)	< 5mg / 1000 cycles	< 5mg / 1000 cycles
SHORE D HARDNESS* (ASTM D2240)	> 75	> 75
COMPRESSIVE STRENGTH* (BS 6319)	> 50N/mm <sup>2</sup>	> 50N/mm <sup>2</sup>

NOTE: All coating systems represented here are recommendations only and may vary from case to case.  
\*Subjected to type of system or finishing.



# AQUA EPOXY | WATER-BASED FLOOR COATING

## LIGHT INDUSTRIAL / COMMERCIAL AREAS



### Aqua Epoxy

Antimicrobial Water-based Floor Coating System



Antimicrobial



Abrasion Resistance



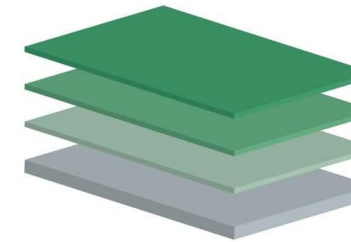
Various Colours Selection



Low Odour



Water Based



- 3 Aqua Epoxy
- 2 Aqua Epoxy
- 1 EA9 Finish HB
- 0 Prepared and Treated Concrete

### Aqua Epoxy (Tiles)

Antimicrobial Water-based Floor Tiles Coating System



Antimicrobial



Abrasion Resistance



Easy Refurbishment



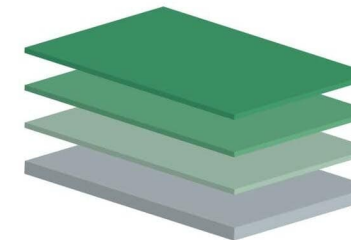
Low Odour



Water Based



Various Colours Selection



- 3 Aqua Epoxy
- 2 Aqua Epoxy
- 1 Tile Primer
- 0 Prepared and Treated Tiles

SYSTEMS	Aqua Epoxy	Aqua Epoxy (Tiles)
NO. OF COATS	3	3
TOTAL THICKNESS (MM)	0.2 - 0.25	0.2 - 0.25
HARDNESS (ASTM D3363)	2H	2H
ABRASION RESISTANCE (ASTM D4060)	83mg / 1000 cycles	83mg / 1000 cycles

NOTE: All coating systems here are represented here are recommendations only and may vary from case to case.

When choosing floor coatings, various industries from light industrial to commercial areas have to be considered. One of the factors to be considered is the indoor air quality as this affects the well-being of the people in the area. Hence, a floor coating with low VOC is desirable for facilities looking to minimize the unintended consequences of lesser air quality.

A wide range of colours of different shades are offered with the our flooring systems. With this, floorings can be customized to fit the preferred aesthetics. Our floor systems are also suitable to be applied on already tiled floors. This would make maintenance much easier as it does not require to hack and replace tiles.

**Nippon Paint's Aqua Epoxy** is an antimicrobial, low VOC and environmentally friendly floor solution certified by Singapore Green Label Scheme. With excellent abrasion resistance properties, this flooring solution is suited for industrial uses as well.

### CHEMICAL RESISTANCE CHART

CHEMICALS	SOLVENTS	OILS	OTHERS
✓ SODIUM HYDROXIDE (50%)	✓ METHANOL	✓ OIL - DIESEL	✓ COFFEE / TEA
✓ CALCIUM HYDROXIDE (20%)	✓ ISOPROPANOL	✓ OIL - PETROL	✓ CITRUS JUICE
✓ AMMONIA (20%)	✓ XYLENE	✓ BRAKE FLUIDS	✓ DISTILLED WATER
✓ PHOSPHORIC ACID (10%)	✓ TOULENE	✓ MOTOR OIL	✓ DEIONIZED WATER

NOTE: 1) Discoloration, staining or any change in gloss may be observed when expose to chemicals. This will be considered resistant as long as there is no deterioration and reduction of paint film properties and integrity.  
2) Above results were based on 1457 Misty Grey colour. Result may vary marginally from colour to colour.



# CAR PARK DECK SYSTEM | CAR PARK FLOORING

## COMMERCIAL CAR PARKS



In this modern era, car parks are scattered across metropolitans to cater the needs of the people there. With the improvement of the automotive industry, many people now own cars for their daily usage. Due to this, car parks are high in demand in places such as office complexes, airports, tourism attractions, and even residential areas.

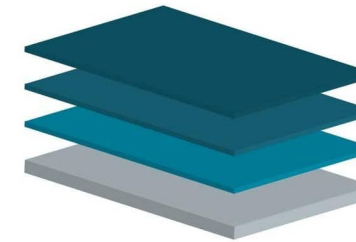
There are a variety of car parks but the most common car parks are the multi-story car parks above and below ground. An important feature about these car parks is the flooring due to the heavy traffic and the weathering conditions. Another feature is the ability to reflect light to ensure the car parks are well lit to ensure line markings and pedestrians can be seen clearly.

**Nippon Paint Car Park Deck System** have a variety of solutions for multi-story car parks and even car parks exposed to the weather conditions. Furthermore, the **Nippon Paint FloorShield** series includes floor markings for the road and car park lines for a clear visual for line markings.

### CAR PARK DECK ID Intermediate Deck

UV-Resistant Standard Car Park System

- Abrasion Resistance
- UV Protection
- Chemical Resistance
- Attractive Finishing



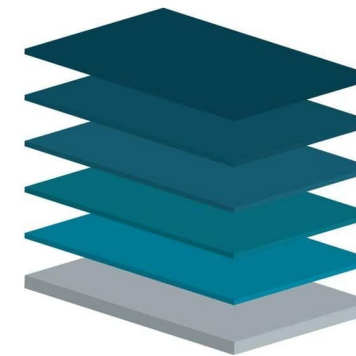
- 3 FloorShield SB PU Finish
- 2 FloorShield SF Epoxy Finish
- 1 FloorShield SF Epoxy Primer
- 0 Prepared and Treated Concrete

Also Available:  
For Anti-Skid Purpose  
ORANGE PEEL SYSTEM  
BROADCAST SAND SYSTEM  
PU ANTI-SKID SYSTEM

### CAR PARK DECK BD Basement Deck

Epoxy Mortar Moisture Barrier Car Park System

- Moisture Barrier
- Abrasion Resistance
- UV Protection
- Chemical Resistance
- Attractive Finishing



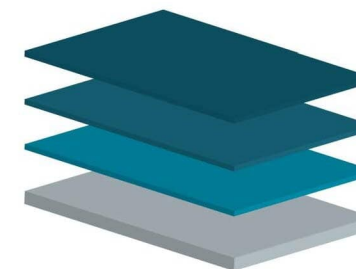
- 5 FloorShield SB PU Finish
- 4 FloorShield SF Epoxy Finish
- 3 FloorShield SF Epoxy OP Textured Finish
- 2 FloorShield SF Epoxy Mortar
- 1 FloorShield SF Epoxy Primer
- 0 Prepared and Treated Concrete

Also Available:  
For Anti-Skid Purpose  
ORANGE PEEL SYSTEM  
BROADCAST SAND SYSTEM  
PU ANTI-SKID SYSTEM

### CAR PARK DECK ED Exposed Deck

Waterproofing Car Park System

- Waterproofing
- Abrasion Resistance
- Attractive Finishing
- UV Protection
- Chemical Resistance



- 3 FloorShield SB PU Finish
- 2 FloorShield SB PU Finish
- 1 PrimeCrete WB (formerly known as LM Primer C WB)
- 0 Prepared and Waterproof Treated Concrete

Also Available:  
For Anti-Skid Purpose  
ORANGE PEEL SYSTEM  
BROADCAST SAND SYSTEM  
PU ANTI-SKID SYSTEM





**EXPOSED** Car Park



**INTERMEDIATE** Car Park



**BASEMENT** Car Park

**CAR PARK ANCILLARIES**  
(Lining / Marking)

UV-Resistant Car Park Lining & Marking



Abrasion Resistance



Chemical Resistance



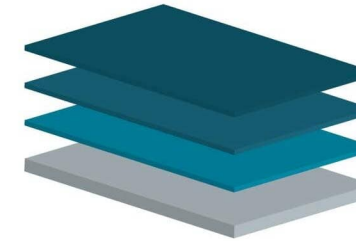
Easy to Apply



UV Protection



Easy Maintenance



- 3 FloorShield SB PU Finish
- 2 FloorShield SB PU Finish
- 1 FloorShield SF Epoxy Primer
- 0 Prepared and Treated Concrete

SYSTEMS	CAR PARK DECK ID Intermediate Deck	CAR PARK DECK BD Basement Deck	CAR PARK DECK ED Exposed Deck
NO. OF COATS*	4	5	4
TOTAL THICKNESS (MM)*	0.5 - 0.6	5.0 - 5.5	0.3 - 0.5
ABRASION STRENGTH (ASTM D4060)	< 80mg / 1000 cycles	< 80mg / 1000 cycles	< 80mg / 1000 cycles
ADHESION STRENGTH (ASTM D4541)	> 1.5N/mm <sup>2</sup>	> 1.5N/mm <sup>2</sup>	> 1.5N/mm <sup>2</sup>
UV LIGHT RESISTANCE	Excellent (Non-Yellowing)	Excellent (Non-Yellowing)	Excellent (Non-Yellowing)
SHORE D HARDNESS (ASTM D2240)	> 75	> 80	-
COMPRESSIVE STRENGTH (ASTM C579)	> 85MPa	> 40MPa	-
FLEXURAL STRENGTH (ASTM C580)	> 40MPa	> 20MPa	-

SYSTEMS	Car Park Ancillaries (Lining / Marking)
NO. OF COATS	3
TOTAL THICKNESS (MM)	0.35
ABRASION RESISTANCE (ASTM D4060)	< 80mg / 1000 cycles
ADHESION STRENGTH (ASTM D4541)	> 1.5N/mm <sup>2</sup>

NOTE: All coating systems represented here are recommendations only and may vary from case to case.  
\*Subjected to type of system or finishing.



# FLOORSPORTS | SPORTS COURT FLOORING

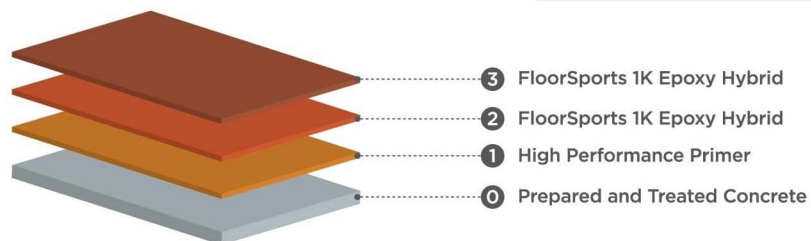
## EXTERIOR SPORTS COURTS



### FLOORSPORTS 1K Epoxy Hybrid

Acrylic Epoxy Hybrid Sports Court System

- Easy to Apply
- Good Durability
- Abrasion Resistance
- UV Protection



In many residential parks or apartments, community courts are available for multiple uses. Besides the occasional events or gathering, outdoor sports may also be conducted regularly in these courts. Therefore, the flooring of these courts has to be safe for multiple uses for a variety of events.

Our **Nippon Paint FloorSports** solutions come in a wide range of colours to suit the purpose of the court. Furthermore, our coating solutions provide excellent water resistance and non-skid properties which is essential in a tropical climate. For example, our **FloorSports 1K Epoxy Hybrid** system has a certified pace rating based on the International Tennis Federation (ITF).

### FLOORSPORTS 1K Epoxy Hybrid (Anti-Slip)

Anti-Slip Acrylic Epoxy Hybrid Sports Court System

- Slip Resistance
- Easy to Apply
- Good Durability
- Abrasion Resistance
- UV Protection



\*Non-Skid Sand will differ with different application method (Roller or Trowel)

### FLOORSPORTS MASTIC Shock Absorbance System

Mastic Integrated Acrylic Epoxy Hybrid Sports Court System

- Easy to Apply
- Good Durability
- Shock Absorption
- Abrasion Resistance
- UV Protection



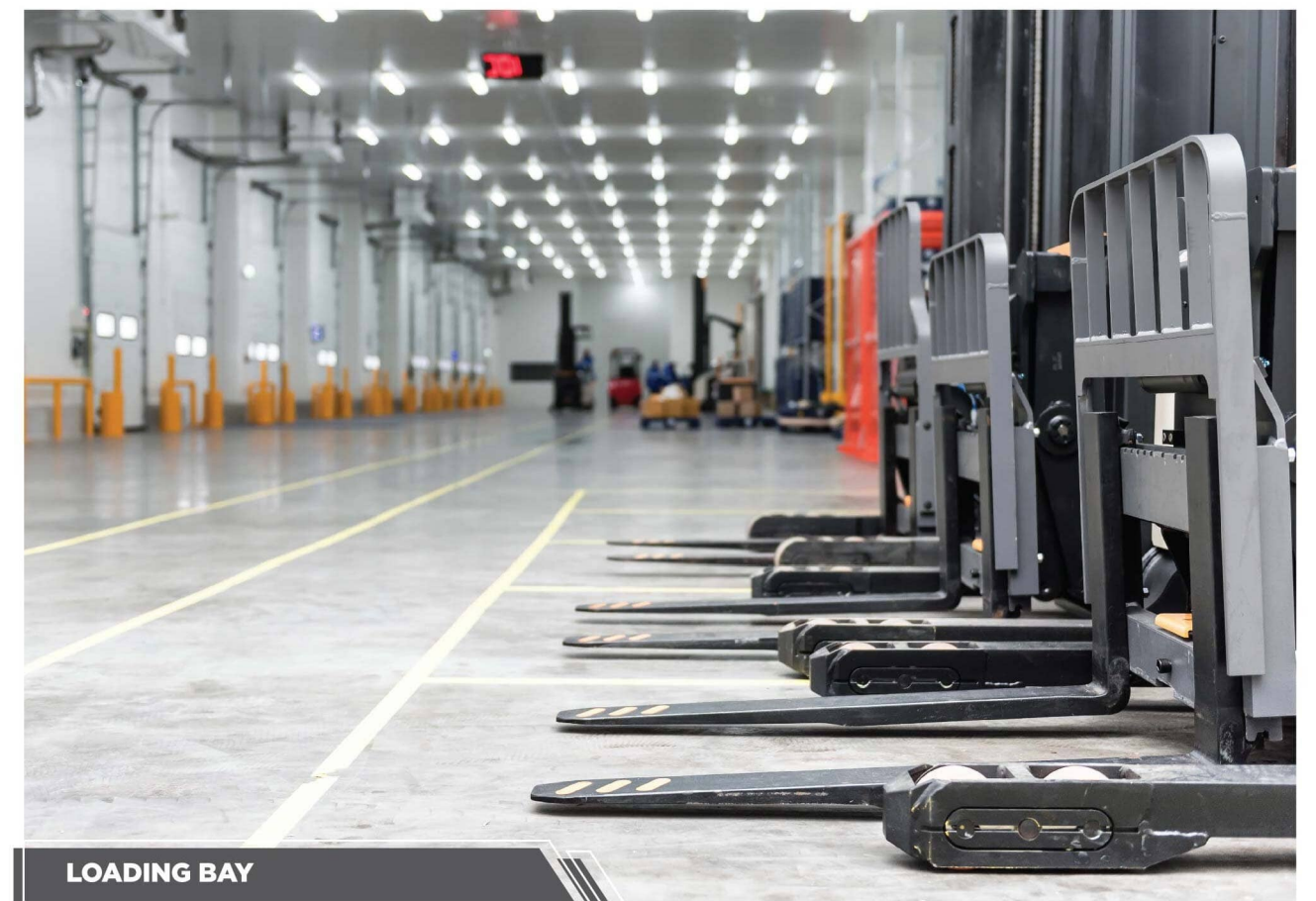
SYSTEMS	FLOORSPORTS 1K Epoxy Hybrid	FLOORSPORTS 1K Epoxy Hybrid (Anti-Slip)	FLOORSPORTS MASTIC Shock Absorbance System
NO. OF COATS	3	3	4
TOTAL THICKNESS (MM)	0.15 - 0.20	1.4 - 2.2	2 - 3
ABRASION STRENGTH (ASTM D4060)	< 100mg	< 100mg	< 100mg
SHORE D HARDNESS (ASTM D2240)	55	55	< 55
ADHESION STRENGTH (ASTM D4541)	< 1.5N/mm <sup>2</sup>	< 1.5N/mm <sup>2</sup>	< 1.5N/mm <sup>2</sup>
ELONGATION (ASTM D638)	12%	12%	-
TENSILE STRENGTH (ASTM D638)	8.40N/mm <sup>2</sup>	8.40N/mm <sup>2</sup>	-



# FLOOR HARDENER



FACTORY WORKSHOP



LOADING BAY

## FLOOR HARDENER Nippon Paint HardTop



Abrasion Resistance



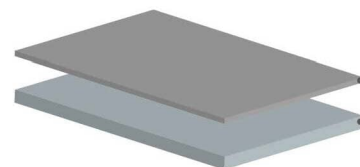
Dust Free



Chemical Resistance



Impact Resistance



1 Nippon Paint HardTop

2 Prepared and Treated Concrete



For hardening freshly placed horizontal concrete slabs and toppings, **Nippon Paint HardTop** is an economical and easy to use non-metallic dry shake designed for concrete casting and cure monolithically to form a dense and hard surface that resists oils and chemicals penetration.





Suitable for: Car park decks, ramps, warehouses, loading bays, etc.



# CHEMICAL RESISTANCE CHART

This chart serves as a guide for **Nippon Paint FloorShield** industrial flooring range to select the best products for chemical environments. The results below were conducted under laboratory testing under prolonged durations. In practical situations, chemicals only attack the surface of flooring systems where maintenance protocols are practiced, which significantly shortens exposure time.

					
		FLOORSHIELD SB PU Finish	FLOORSHIELD SF Epoxy Finish	FLOORSHIELD SL1 / SL2 Epoxy Finish	FLOORSHIELD Ucreed MD & Ucreed HD
CHEMICALS					
	%				
SODIUM HYDROXIDE	10	★	★	★	★
	30	★	★	★	★
	50	★	★	★	★
CALCIUM HYDROXIDE	10	★	★	★	★
	20	★	★	★	★
AMMONIA	10	★	★	★	★
	20	★	★	★	★
SULPHURIC ACID	5	★	★	★	★
	10	★	●	★	★
	20	★	●	●	★
NITRIC ACID	5	★	●	●	★
	10	★	X	X	★
	20	★	X	X	★
PHOSPHORIC ACID	5	★	●	●	★
	10	★	●	●	★
	20	★	●	●	★
GLACIAL ACETIC ACID	5	★	●	●	★
	10	★	●	●	★
	20	★	●	●	★
HYDROCHLORIC ACID	5	★	★	★	★
	10	★	★	★	★
	20	★	●	●	★
SOLVENT					
METHANOL		★	★	●	★
ISOPROPANOL, IPA		★	★	●	★
XYLENE		★	★	●	★
METHYL ETHYL KETONE, MEK		★	★	X	●
TOLUENE		★	★	X	★

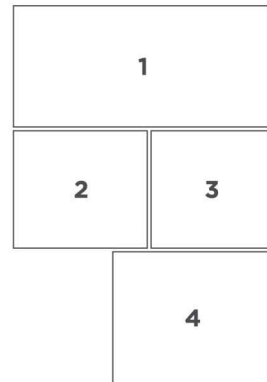
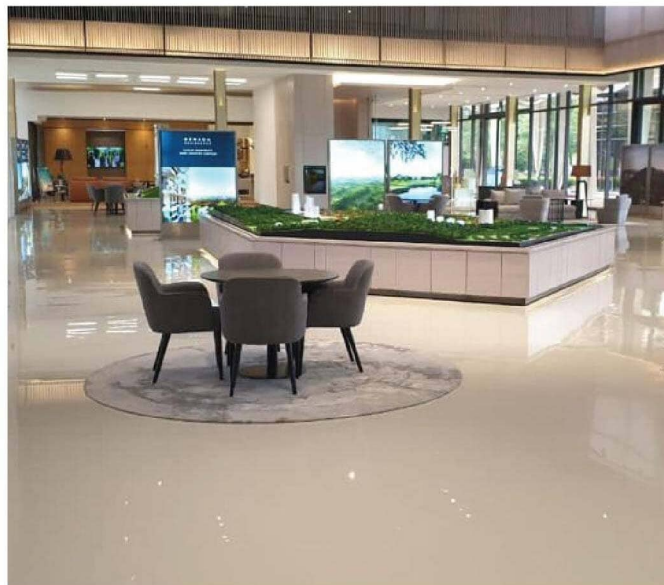
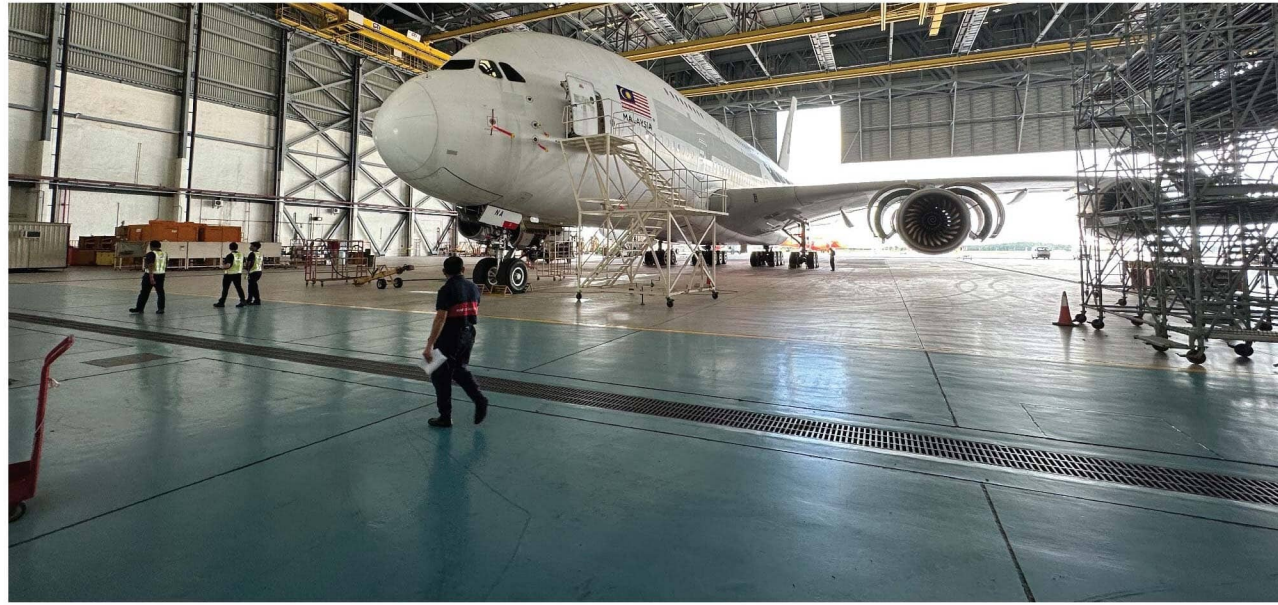
					
		FLOORSHIELD SB PU Finish	FLOORSHIELD SF Epoxy Finish	FLOORSHIELD SL1 / SL2 Epoxy Finish	FLOORSHIELD Ucreed MD & Ucreed HD
VEHICLE CHEMICALS					
DIESEL		★	★	★	★
PETROL		★	★	★	★
AIR COOLANT		★	★	★	★
BRAKE OIL		★	★	★	★
ENGINE OIL		★	★	★	★
SKYDROL (PE-5 / 500B-4 / LD-4)		●	●	X	★
FOOD SUBSTANCES					
CITRUS JUICE		★	★	★	★
MILK		★	★	★	★
BEER		★	★	★	★
COFFEE / TEA		★	★	★	★
SOY SAUCE		★	★	★	★
VEGETABLE OILS		★	★	★	★
CARBONATED DRINKS		★	★	★	★
ANIMALS OILS		★	★	★	★
OTHERS					
SEAWATER		★	★	★	★
DISTILLED WATER		★	★	★	★
DEIONIZED WATER		★	★	★	★
UREA		★	★	★	★

- ★ **Excellent Resistance**  
Long term resistant assuming reasonable cleanliness standards
- **Limited Resistance**  
Short term resistant assuming infrequent and short-term contact
- X **No Resistance**  
Floor is attacked upon contact with chemical

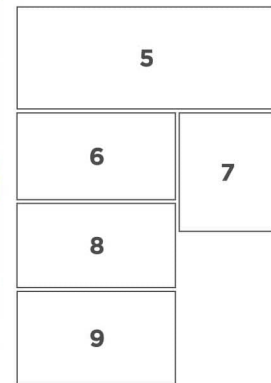
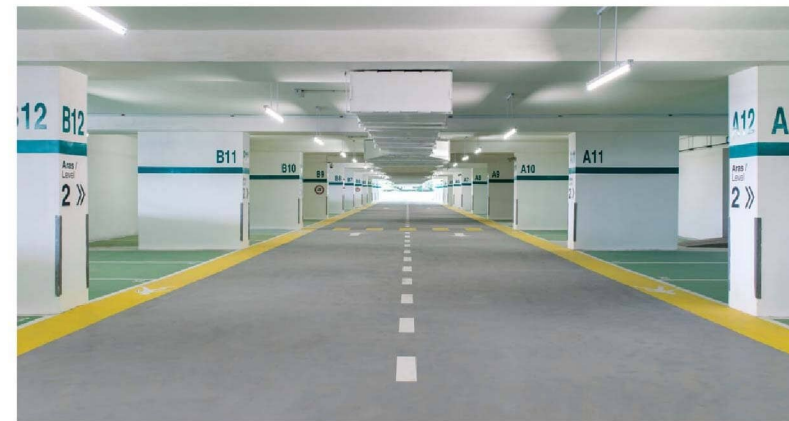
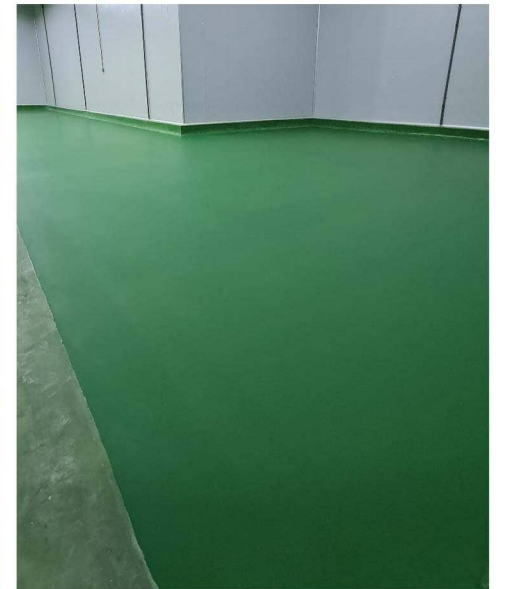
NOTE: 1) Discoloration, staining or any change in gloss may be observed when expose to chemicals. This will be considered resistant as long as there is no deterioration and reduction of paint film properties and integrity.  
2) Above results were based on 1457 Misty Grey colour. Result may vary marginally from colour to colour.



# PROJECT REFERENCE



- 1. Airport Hangar, Kuala Lumpur
- 2. KLGCC Resort, Kuala Lumpur
- 3. Volkswagen 3S Centre, Alor Setar
- 4. Institut Latihan DBKL, Kuala Lumpur



- 5. One Utama EV Charging Bay, Selangor
- 6. Airport Engine Room, Kuala Lumpur
- 7. Gaban Spice Manufacturing, Penang
- 8. KL Trillion, Kuala Lumpur
- 9. I-Santorini, Penang



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