# Parking Facility Floor Protection Systems

The experience starts here

EpiMax 222 EpiMax 330 EpiMax 333 EpiMax 333AR EpiMax 333WB Express EpiMax 777UHD EpiMax 999WB EpiMax 2150



## What needs to be considered in the selection of a Parking Facility Floor Protection System?

## • Mechanically durable, high surface integrity and non-dusting

The flooring system must meet the mechanical requirements including impact and abrasion. Unprotected concrete in parking facilities will dust.

#### Chemically resistant to automotive oils and fluids - waterproof

Unprotected concrete is extremely susceptible to a wide variety of chemical attack. Automotive fluids can penetrate, stain and deteriorate concrete slabs. Any protection system must resist this and also protect the concrete structure from water entry.

#### Bright and attractive colour selectable

Today, designers have more choice by creating a welcoming environment that is simple to navigate and easy to understand. Colours will reflect light onto surrounding concrete surfaces to create a warm glow and imprint location in the visitor's memory for easier navigation.

#### Minimal tyre squeal

Tyre noise is influenced by tyre type, air pressure, wheel alignment, vehicle speed, vehicle mass, turning radius and the nature of the floor surface itself. However, some surfaces perform better than others due to the nature of the system themselves.

#### Comply with AS 4586/HB 198 Slip resistance guide

The flooring system must provide adequate traction in the working conditions of the facility. Traction is influenced by contaminants (water, oil, dust etc) and standards exist for particular environments. Newer systems offer superior traction and are still easy to clean.

#### Comply with GBCA Low VOC standard - sustainability

Systems should meet or exceed the requirements of IEQ.13.1, Green Star Office Interiors, Indoor Environment Quality. However, a low VOC level is not all that is required to make a coating sustainable. The arithmetic of the application and the durability is very important. If the system lasts longer, it's even better.

#### Pass the Hot Tyre Test

Hot tyre pickup resistance is important for parking facility flooring, otherwise thermal softening can occur when cars are left parked. Under static pressure, the tyre can bond to the floor surface resulting in marking or even coating lift. Systems with higher chemical crosslink density will perform best.

#### Hygienic, trip resistant, easy to clean and maintain

Floor surfaces that are non-porous, monolithic and chemically inert are hygienic. They are also easy to clean. But they should also allow proper drainage. Performance systems are more likely to be maintenance free.

### • Practical application characteristics

The practical aspects of access and application are important considerations in any project. Newer systems are self priming. Any line-marking process must be straightforward and provide trouble-free adhesion.

#### • Durability - provision for warranty

The selection must meet the agreed design life and the intended maintenance-free period. What is the required design life - 5, 10 or 20 years? System and application warranties should match the specification and budget.

## **EpiMax**





**Parking facilities** represent very significant commercial and public investments. And in today's world they must all start with a positive experience. Parking facilities are the best place to make a good first impression.

These facilities are important structures that come with a unique set of challenges and considerations. Today, construction and operation should meet "green standards" with sustainable features. The parking process itself should "easy" for users and incorporate adequate lighting. Efficient ramp and traffic flow design is important. Convenient navigation advice and state-of-the-art technology for revenue collection are critical. Architecture should be aesthetically pleasing and complimentary to the neighbourhood. However, a growing issue in today's world is passive and active security or users and assets.

#### What are the overall objectives of modern parking facility management?

- Functional and fit for purpose
- Energy efficient operationally
- Provide adequate personal safety
- Environmentally sustainable during construction and throughout life
- Litigation free
- Maximise the precinct setting synonymous with general built environment
- Meet ROI objectives

**EpiMax** is your source for the latest proven developments in performance protection systems. This is all we do. Our systems build on break-through technologies (extreme chemically resistant third generation epoxy novolac chemistry, high performance water based chemistry, new polyaspartic chemistry). EpiMax has built its reputation on a construction engineering foundation. Our experience has been forged on an impressive variety of civil, environmental, industrial, mining, defence and general services construction. This success has been proven through partnerships with forward-thinking architects, consultants, engineers, application contractors, project managers and materials testing agencies. We believe in teamwork, respect and integrity.

#### Our primary focus is

- Floor Protection Systems
- Industrial Concrete Protection Systems
- Green Certified Protection Systems
- Water and Wastewater Processing Protection Systems
- Foundation Protection Systems
- Extreme CAT (Corrosion, Abrasion and Thermal) Protection Systems

#### EpiMax: Expertise Applied, Answers Delivered

#### Typical Asset Depreciation



## Applications

Apartment and retail development:

- Car park floor and wall protection
- Car wash and maintenance areas
- Entrance precincts
- Polished concrete protection
- General shop fit out flooring
- Factory outlet stores
- Retail warehouses
- Stock rooms
- Plant rooms
- Retail kitchens
- Fire stairs
- Waste management areas

#### Commercial development:

- Car park floor and wall protection
- Polished concrete protection
- Entrance precincts
- Wholesale warehouses
- Stock rooms
- Plant rooms
- Commercial kitchens
- Fire stairs
- Waste management areas



## EpiMax 222

Exceptional two-pack epoxy protection system demonstrating excellent adhesion and general durability.

- Trowel application to 5+ mm
- Certified traction levels available
- Tough and abrasion-resistant; excellent for heavy traffic
- Resistant to a wide range of industrial chemicals
- Ideal for rain damaged concrete repair, wet areas, ramps etc

## EpiMax 330

Latest solventless high build technology providing lasting performance at low installed cost.

- Highest roll-on performance for application to 500 microns
- Resistant to a wide range of industrial chemicals
- Food safe application phase
- Variable slip resistance available
- Wide range of colours

## EpiMax 333

A two-pack high solids epoxy coating system demonstrating excellent adhesion and general durability.

- Roller or airless spray application to 300 microns in two coats
- Heavy duty resistance to a wide range of industrial chemicals
- Good mechanical performance
- Variable slip resistance available in flooring applications
- Wide range of colours

## EpiMax 333AR

A two-pack solventless novolac coating system demonstrating outstanding chemical resistance and adhesion.

- Roller or airless spray application to 300 microns in two coats
- Highly resistant to splashes and spills of mineral acids etc
- Selected for battery re-charge areas, service areas, bunds etc
- Variable slip resistance available in flooring applications
- Easy application







## EpiMax 333WB Express

A rapid hardening two-pack water based epoxy system that provides excellent protection to all forms of concrete. This system can be used to prepare easy-clean wall and floor surfaces for a wide range of applications.

- Roller or airless spray application to 250 microns
- Rapid return to service
- ZERO VOC compliance
- Ideal for floors and walls
- Non skid version available



## EpiMax 777UHD

A high performance, gloss, two-pack solventless polyurethane coating that provides a durable gloss finish to architectural areas.

- Thin film chemistry 150 microns
- Low VOC compliance
- Fast hardening
- Excellent scuff resistance
- Re-coatable
- Also available in Matt version



## EpiMax 999WB

The maintenance free solution for general car park floor protection which demonstrates excellent adhesion and general durability.

- Fast installation
- Mechanically durable, high surface integrity and non dusting
- Chemically resistant to automotive oils and fluids
- Minimal tyre squeal non marking
- Environmentally sustainable maintenance free

## EpiMax 2150

A proven product designed to create a durable, anti dusting finish for many warehouse concrete floors. These finishes also reduce staining and are aesthetically pleasing. Formulated to increase the overall integrity, strength and life expectancy of concrete surfaces and to enhance waterproofing at the same time.

- Single pack
- Water based
- Quick return to service
- Maintenance free
- Externally durable

## Test Standards Met

#### AS/NZS 4586:2014

Slip resistance classification of new pedestrian surface materials.

This Standard provides a means of classifying pedestrian surface materials according to their frictional characteristics when determined in accordance with the test methods included. These test methods enable characteristics of surface materials to be determined in either wet or dry conditions.

The test methods in this Standard shall be used for the classification of pedestrian surface materials for use in either the wet or the dry condition.

The inclining ramp test methods are suitable for measuring the slip resistance of gratings, heavily profiled surfaces and resilient surfaces within the test laboratory environment.

In the field, the most commonly accepted and specified method of measuring slip resistance is by use of the TRL Pendulum Tester incorporating a rubber slider.

The range of EpiMax Parking Facility Floor Protection Systems have been tested to AS/NZS 4586:2014.

## HB 198 An introductory guide to the slip resistance of pedestrian surface materials.

This Handbook provides guidelines for the selection of slip-resistant pedestrian surfaces classified in accordance with AS/NZS 4586. It recommends the minimum floor surface classifications for a variety of locations, and includes a commentary on the test methods set out in AS/NZS 4586, as well as information on the consideration of ramped surfaces. Published in conjunction with the CSIRO.

#### AS/ISO 9239.1 2003 Reaction to Fire Tests for Floorings. Critical Radiant Flux Energy.

To meet the Building Code of Australia, floor materials and floor coverings meet certain minimum Critical Radiant Flux (CRF) energies, and for non sprinklered buildings, a maximum smoke development rate.

The test method for these tests involves heating the horizontal test sample along its length with a radiant panel and then igniting it at the hot end. The sample is allowed to burn until the flame goes out (extinction). The heat energy measured at the point of extinction is the Critical Heat Flux (CHF), also called the Critical Radiant Flux (CRF) in the Building Code of Australia.

Smoke is measured over the duration of the test. The total amount of light extinction (measured as a percentage) due to the smoke obscuring a light beam in the flue is multiplied by the time of the test to give the result (in percent minutes).

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## Environmentally sustainable



## Resistance to abrasion and impact



Durable



## High adhesion



## Resistance to chemicals



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