KingDeck ® AJ System

Solvent free slip resistant flexible polyurethane vehicle decking system.

DESCRIPTION

KingDeck AJ System is a hard wearing, solvent free, flexible polyurethane coating system primarily designed for use in car parks. It has excellent resistance to petrol, battery acid, diesel, brake fluid, de-icing salts, etc. Other applications include walkways, balconies, etc. KingDeck AJ System is formulated for easy application by squeegee, roller or brush.

The KingDeck AJ System consists of three layers:

- KingDeck Primer PC100, a primer with excellent adhesion to concrete, screed and asphalt substrates.
- KingDeck WC200, a pigmented wearing course with excellent resistance to abrasion and chemical attack.
- KingDeck WC200 Plus, for outdoor application, which is specifically formulated for colour stability and will not discolour on exposure to sunlight or other sources of UV light. It is available in a wide range of colours.
- Antislip Aggregates, a hard-wearing quartz for producing an anti-slip finish.
- KingDeck Reactivator, a one part polyurethane to reactivate layers if the overcoat time is exceeded.

APPLICATIONS

KingDeck AJ System is designed for use in applications, such as:

- Car park decks.
- Car park ramps and turning circles.
- Traffic aisles and parking bays.

ADVANTAGES

- Excellent resistant to petrol, battery acid, diesel and brake fluid.
- Resistant to de-icing.
- Available in a special grade "KingDeck WC200 Plus" for outdoor applications.
- Fire resistant system.
- Reduces noise.
- Slip resistant.
- Can be applied with smooth or slip resistant finish.
- Suitable for asphalt and concrete substrates.

TECHNICAL PROPERTIES

Properties @ 25°C:	Primecoat E	Wearcoat TG	Wearcoat Plus
Working time:	180 min	60 min	20 min
Mixed density:	1.1 g/cm³	1.6 g/cm³	1.35 g/cm³
Tack-free time:	12 hr	4 hr	8 hr
Maximum overcoat time:	36 hr	24 hr	30 hr
Full cure:	7 days	7 days	7 days
Adhesion to concrete:	> 1.0 MPa (substrate failure)	> 1.0 MPa (substrate failure)	> 1.0 MPa (substrate failure)
Adhesion to asphalt:	> 1.0 MPa (substrate failure)	> 1.0 MPa (substrate failure)	> 1.0 MPa (substrate failure)
Tensile strength:	Not tested	10 MPa	9 MPa
Shore D hardness:	Not tested	80	60
Volume solids:	100%	100%	100%
Application temperature range:	Do not apply if the ambient or floor temperature is to fall below 5ºC during the first 24 hours or if rain or condensation is likely		
Slip resistance – typical figures: BS 7976, Part 2:2002	Coarse Quartz Aggregate blind TRL slider: 84 dry, 72 wet 4-S slider: 61 dry, 53 wet Coarse KingDeck Aggregate blind TRL slider: 90 dry, 64 wet 4-S slider: 99 dry, 75 wet		
External fire exposure roof test: BS 476, Part 3:1958	EXT.F.AA (full system test)		

SYSTEM SPECIFICATION

The combination of products specified depends on the area within the car park to which the KingDeck is being applied.

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COVERED DECKS

Antislip finish for ramps and turning circles

- KingDeck PC100 + full blind of Antislip Aggregates #2.
- Two coats of KingDeck WC200 .
- Dry film thickness ≈ 1.4 mm.

Antislip finish for traffic aisles and parking bays

- KingDeck PC100 + full blind of Quartz Aggregate #3.
- KingDeck WC200.
- Dry film thickness ≈ 0.9 mm.

Smooth finish for traffic aisles and parking bays

- KingDeck PC100
- Two coats of KingDeck WC200.
- Dry film thickness ≈ 550 micron.

EXPOSED DECKS (OUTDOOR APPLICATION)

Ramps and turning circles

- KingDeck PC100
- KingDeck PC100+ full blind of Antislip Aggregates #2.
- Two coats KingDeck WC200Plus.
- Dry film thickness ≈ 1.6 mm.

Traffic aisles and parking bays

- KingDeck PC100
- KingDeck PC100 + full blind of Antislip Aggregate #3.
- KingDeck WC200Plus.
- Dry film thickness ≈ 1.1 mm.

Smooth finish for traffic aisles and parking bays

- KingDeck PC100
- Two coats of KingDeck WC200Plus.
- Dry film thickness ≈ 550 micron.

Notes: Indoor or exposed decks, where waterproofing surface is required, use KingDeck EW system.
Other grades of Anti-slip Aggregates can be used but finish should be checked and approved by end user.

METHOD OF USE

KingDeck PC100

Surface Preparation and Priming

To obtain a proper bond the substrate must be structurally sound clean, dry (less than 75% RH measured using a hygrometer, unless it is a suspended deck free to dry from below) and free from dust, laitance, oils, paints or other forms of contamination.

Grit blasting, grinding or scarification can be used to remove laitance and surface contamination.

Areas known to have been subject to heavy contamination should be thoroughly inspected before applying KingDeck PC100 This is especially important where deposits of oil or grease have collected.

Any irregularities within the substrate should be made good before the application of the KingDeck Primecoat E. Small defects may be made good using KingDeck PC100mixed with dry fine sand.

If the substrate has a relative humidity reading greater than 75%, two coats of Kingfloor DPM should be used, followed by KingFloor Primer fully blinded with Medium Quartz Aggregate, before coating with KingDeck PC100 .

Mixing

KingDeck PC100 comprises two components; a resin and hardener which are supplied pre-weighed in the correct proportions. Under no circumstances should part mixing be carried out.

Taking care to ensure that the bottom and sides are thoroughly drained, pour the contents of the hardener portion into the resin container.

Using a power whisk attached to a slow speed electric drill, mix for approximately 2 minutes, scrape down and re-mix for a further 1 minute, avoiding the entraining of excessive air, until a uniform consistency is obtained. Allow to stand for 1 minute. If the filler is to be used, add this to the mixed material and mix for a further 1 minute.

Note: Never mix KingDeck PC100 by hand as this could lead to areas of uncured material.

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COVERAGE

Application	Antislip finish			Smooth finish		
	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor
	Ramps & turning circles	Ramps & turning circles	Traffic aisles & parking bays	Traffic aisles & parking bays	Traffic aisles & parking bays	Traffic aisles & parking bays
KingDeck PC100	One coat	Two coats	One coat	Two coats	One coat	
	0.25 - 0.30 kg/m^2 per coat		0.25 - 0.30 kg/m^2 per coat		0.20 - 0.30 kg/m^2 per coat	
Antislip #2 or #3	#2 Aggregate (fully blinded)		#3 Aggregate (fully blinded)			
	2 - 3 kg/ m^2		2 - 3 kg/ m^2			
Wearcoat TG	Two coats 0.60 kg/m^2 for 1st coat 0.40 kg/m^2 for 2nd coat		One coat 0.60 kg/m^2 per coat		Two coats 0.33 kg/m^2 per coat	
Wearcoat Plus		Two coats 0.50 kg/m^2 for 1st coat 0.33 kg/m^2 for 2nd coat		One coat 0.50 kg/m^2 per coat		Two coats 0.28 kg/m^2 per coat
System thickness	1.4 mm	1.6 mm	0.9 mm	1.1 mm	600 - 700 microns	600 - 700 microns

APPLICATION

Once mixing is complete, spread the KingDeck PC100 onto the floor using a squeegee and/or medium pile roller, ensuring it is worked well into the surface.

To obtain an antislip finish, whilst KingDeck PC100 is still wet, seed till fully blinded with Antislip Aggregates at the rate of 2 - 3 kg/m² and allow to dry. All excess aggregates shall be removed before applying the final top coats.

OVER COATING

KingDeck PC100may be overcoated as soon as it becomes tack free. If overcoating of the KingDeck PC100exceeds 30 hours, light scarification of the surface should be undertaken before further applications of Primecoat E or Wearcoat.

KINGDECK WC200 AND WEARCOAT PLUS

Surface Preparation

All surfaces should be properly prepared and primed with KingDeck PC100 before application of the KingDeck WC200.

Mixing

KingDeck WC200 comprises two components, a resin and hardener, which are supplied pre-weighed in the correct proportions. Under no circumstances should part mixing be carried out.

Taking care to ensure that the bottom and sides are thoroughly scraped, transfer the entire contents of both components into a separate mixing container. Using a power whisk attached to a slow speed electric drill, mix for approximately 3 minutes ensuring the mixing head is pushed around the sides and bottom of the mixing container.

Note: Never mix KingDeck WC200 by hand as this could lead to areas of uncured material. Premixing of the resin component will aid mixing.

APPLICATION

On completion of mixing, immediately apply the KingDeck WC200 at the required thickness to the applied KingDeck PC100.

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CLEANING

Tools should be cleaned with KINGKRETE Solvent immediately after use.

PACKAGING

KingDeck PC100 is available in 5 and 20 kg packs.
KingDeck WC200 is available in 5 and 15 kg packs.
KingDeck WC200 Plus is available in 5 and 15 kg packs.
Antislip Aggregates is available in 25 kg bags.

STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.

HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative.

KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY AND CARE

All products originating from KingKrete's manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

* Properties listed are based on laboratory-controlled tests.

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KingKrete Middle East
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