KingDeck® HB System

High build epoxy polyurethane car park decking system.

DESCRIPTION

KingDeck HB Plus System is a hard wearing, high build, epoxy and 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 HB Plus System is formulated for easy application by squeegee, roller or brush.

The KingDeck HB Plus System consists of three layers:

Priming

KingDeck Primer S30: it is a solvent based epoxy sealer/ primer with excellent adhesion to common masonry substrates and KINGKRETE systems. Primer S30 is used only on dry substrates having relative humidity less than 75%. If high thickness primer is required KingDeck Primer is applied taking into consideration the same humidity levels.

On damp substrates where relative humidity is between 75 - 85%, KingDeck DPM should be used as a primer.

High Build Glass Flake Coating

KingDeck HB Glass: is a two pack high solids reinforced with glass flakes for enhancing the durability of the KingDeck HB Plus system.

KingDeck HB Glass is fully blended with chosen Antislip Aggregates, which is a hard-wearing quartz for producing Antislip finish.

PU Top Coat

KingDeck P: solvent based pigmented wearing course polyurethane coating. KingDeck P is resistance to abrasion and chemical attack. Also suitable for outdoor application, which will support colour stability and UV resistance.

APPLICATIONS

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

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

ADVANTAGES

- Seamless.
- Excellent chemical resistance.
- Excellent resistant to petrol, battery acid, diesel and brake fluid.
- Resistant to de-icing.

SYSTEM SPECIFICATION

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

EXPOSED AND COVER DECKS

- KingDeck Primer S30, KingDeck Primer or KingDeck DPM.
- KingDeck HB Glass and full blend of Antislip Aggregates.
- Two coats of KingDeck P.

METHOD OF USE

KingDeck Primer S30, KingDeck Primer or DPM

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 Primecoat. 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 Primecoat. Small defects may be made good using KingDeck Primecoat mixed with dry fine sand.

If the substrate has a relative humidity reading greater than 75% and below 85%, KingDeck DPM should be used. Any irregularities within the substrate should be made good before the application of the primers.

MIXING

KingDeck® HB System

KingDeck Primers comprise 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.

Application

Once mixing is complete, spread the Primecoat onto the floor using medium pile roller, ensuring it is worked well into the surface. Primer S30 is applied at a rate of (0.07 - 0.14) kg/m2 to give a dry film thickness of (40 - 80) microns.

KingDeck Primer and DPM is applied at a rate of (0.2-0.3) kg/m^2 to give a dry film thickness of (180 - 270) microns.

Overcoating

KingDeck Primers may be overcoated as soon as it becomes tack free. If overcoating of the Primecoat exceeds 30 hours, light scarification of the surface should be undertaken before further applications of Primecoat or KingDeck system.

KINGDECK HB GLASS

Surface Preparation

All surfaces should be primed with KingDeck Primer S30, KingDeck Primer or KingDeck DPM before applying KingDeck HB Glass.

Application of KingDeck HB Glass should be carried out within 30hours from applying KingDeck Primers.

MIXING

KingDeck HB Glass 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.

Pre-mix the resin component with a power whisk attached to a slow speed electric drill for 1 minute before mixing both components.

Taking care to ensure that the bottom and sides are thoroughly scraped, transfer the contents of the resin in to the hardener.

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. Transfer the contents into another container, scraping down and re-mixing for a further 2 minutes avoiding the entraining of excessive air until a uniform consistency is obtained.

Note: Never mix KingDeck HB Glass by hand as this could lead to areas of uncured material. Select an appropriate mixing container that will allow proper and effcient mixing.

Application

Immediately after mixing is complete, apply the KingDeck HB Glass onto the primed floor using a short pile roller, or airless spray machine (without filters).

KingDeck HB Glass is applied at a rate of (0.4 - 0.67) kg/m^2 to give a dry film thickness of (300 - 500) microns.

KingDeck® HB System

COVERAGE				
	Spread Rate Kg/m²		Dry Film Thickness Microns	
	Minimum	Maximum	Minimum	Maximum
KingDeck Primer S30:	0.07	0.14	40	80
KingDeck Primer/DPM:	0.2	0.3	180	270
KingDeck HB Glass:	0.40	0.67	300	500
Antislip Aggregate:	3	4	-	-
KingDeck P:	0.2	0.3	70	100

Depending on the Antislip Aggregates used the approximate system thickness will be between 1 - 1.5 mm thickness.

Technical Properties @ 25⁰C:	KingDeck Primer S30	KingDeck Primer	KingDeck DPM	KingDeck HB Glass	KingDeck P
Working time: (min)	180 - 240	90 - 120	50 - 80	60 - 100	180 - 240
Mix density: (g/cm³)	0.95 ± 0.05	1.1 ± 0.05	1.1 ± 0.05	1.35 ± 0.05	1.35 ± 0.05
Tack-free time: (hr)					
Advised overcoating time: (hr)	< 24	< 24	< 24	< 48	< 24
Full cure:	7 days				
Adhesion to concrete: (MPa)	> 1.5	> 1.5	> 1.5	> 1.5	> 1.5
Volume solids:	60%	100%	100%	90%	50%
System 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)				
Gloss:	N/A	N/A	N/A	Gloss	Gloss
System Resistance to abrasion and chemical attack:	Excellent				
	Clear	Clear	Clear	Different grey colours	Different colours

ANTISLIP APPLICATION

KingDeck® HB System

While the KingDeck HB Glass is still tacky (within 1 hour @ 25ºC) it is fully blended with Antislip Aggregates at the rate of 3 - 4 kg/m^2 and allow to dry. All excess aggregates shall be removed before applying the final top coats of KingDeck P.

Mixing

KingDeck P

KingDeck P is a solvent based system and is applied for indoor and outdoor applications. It consists of two components, base (coloured) and hardener. It is applied onto of Antislip Finish System. KingDeck P is applied at a rate of (0.2 - 0.3) kg/m^2/coat to give a dry film thickness of (70 - 100) microns. Minimum two coats should be applied.

CLEANING

Tools should be cleaned with Quickmast Solvent immediately after use.

PACKAGING

KingDeck Primer S30 and KingDeck Primer are available in 5 and 15 kg packs.
KingDeck DPM is available in 5 and 10 kg packs.
KingDeck HB Glass is available in 6 and 20 kg packs.
KingDeck P is available in 6.75 kg (5 ltr) and 27 kg packs (20 ltr).
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
www.kingkrete.com