

Technical Data Sheet No. 263

LawiPen 2-K-PU-Beschichtung



Elastic floor and balcony coating

colour matching with "einzAmix

I. Product

einzA LawiPen 2-K-PU-Beschichtung is a colour resistant, self-spreading coating based on a high-quality 2-K-polyurethane resin. For the construction of viscoplastic floor pavements inside with impact sound insulation and decorative characteristics and for floor coatings outside like terraces, balconies and winter gardens.

Within the system with einzA LawiDox Epoxidharz-Grundierung and einzA LawiPen 2-K-PU-Versiegelung einzA LawiPen 2-K-PU-Beschichtung is classified as VOC and SVOC free and has been tested corresponding to the AgBB (German Committee for Health-Related Evaluation of Building Products) test principles and been certified being low-emission. Usable as pavement being low-emission for common rooms like for example selling floor, office space, exhibition, kindergarden, practice, school and similar.

einzA LawiPen 2-K-PU-Beschichtung shows good spreading and smoothing characteristics and hardens almost without shrinking. The hardened pavement shows good elasticity values and is crack filling from a layer thickness of 2 mm onwards. Decorative designing in conjunction with the einzA DekorChips.

Application purpose	high-quality floor pavement for average demands, inside and outside	
Characteristics	 UV-stable and resistant to yellowing 	
	viscoplastic	
	crack filling	
	 impact sound insulation 	
	solvent-free	
Test corresponding to the AgBB s	cheme Test certificate is available at www.einzA.com	
Colour (standard)	lichtgrau RAL 7035	
Colour shades	mixable in many colour shades according to einzA mix Farb(T)raum, NCS Edition 2 and RAL 840-HR with the einzA mix L "Industrie" colour tinting system " with basis 4	
Gloss level	glossy	
Specific weight	approx. 1.30 g/cm ³ (ready-to-use mixture)	
Binder basis	2-component polyurethane	
Mixing ratio	master batch : hardener = 2 : 1 weight %	
-	master batch : hardener = 100 : 63 volume %	
Package sizes	10 kg (master batch and hardener in unit packages)	
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II. Properties and working instructions

Chemical resistance	the resistance to water, salt solutions, thinned lye and acids is well.
	In case of special requirements please contact our application technology.
Light resistance	very good (inside) in connection with the mandatory top coat with einzA LawiPen Siegel (inside) or einzA LawiDur 2-K-PU-Klarlack (outside)

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Strain at failure	55 % DIN EN ISO 527-3	
max. tear propagation resistance	48 kN/m DIN ISO 34-1	
Shore D hardness	62 corresponding to DIN 53 505 (7 days)	
Abrasion	25 mg ASTM D4060	
Compatibility	do not mix with other products	
Dilution	do not dilute, only to be applied in original condition	
Consumption	approx. 1.3 kg/m ² per 1 mm layer thickness	
Establishing the ready-to-use compo	osition	
	The material has the right mixing ratio. The package of master batch of einzA LawiPen 2-K-PU-Beschichtung has enough volume to absorp the total amount of the hardener for the einzA LawiPen 2-K-PU-Beschichtung.	
	Fill the hardener completely into the package of the master batch.	
	The mixing will be effected mechanically by a slow stirrer with a number of revolutions of 200 - 400 U/min and shall take 2 - 3 minutes till a homogenous compound free of streaks arises. To avoid mixing faults we recommend to decant the resin/hardener composition basically into a clean container and to mix again briefly ("Umtopfen"). In case of partly removal the components have to be stirred and weighted in the mixing ration.	
Pot life (processing time)	max. 45 - 50 minutes at 10 °C	
	max. 25 - 30 minutes at 20 °C	
	max. 15 - 20 minutes at 30 °C	
	The processing of einzA LawiPen 2-K-PU-Beschichtung within this time is mandatory. We recommend to check the processing time with a watch. Exceeding the pot life will cause gloss and colour shifting as well as lower firmness and crawling with the surface.	
Processing temperature	min. 10 °C (air and object temperature) and max. 30 °C	
Processing regulations	The object temperature (floor) and room (air) may not be below 10 °C and/or the air humidity may not be more than 75 %. The temperature difference between floor and room temperature has to be lower than 3 °C so that the hardening will not be disturbed. In case of a dew point situation a regular drying is not possible and hardening disturbances and staining will occur.	
	Fresh polyurethane coatings are sensitive to humidity, the specifications of the air humidity have to be followed mandatorily. The coating of dewy surfaces as well as the usage of wet sand will cause a foaming of the material and has to be avoided. Therefore please check the conditions before start of work.	
Processing properties	Before processing assure the suitable processing temperature of einzA LawiPen 2-K-PU- Beschichtung of min. 10 - 15 °C.	
Drying resp. hardening times at 65 %	6 rel. air humidity	
	walkable after approx. 24 - 36 hours at 10 °C	
	walkable after approx. 18 - 24 hours at 20 °C	
	walkable after approx. 12 - 15 hours at 30 °C	
	mechanically stressable after approx. 2 - 3 days at 20 °C	
	complete hardening and chemically stressable after approx. 7 days at 20 °C	
Reworkable	after 18 - 24 hours, at the latest after 48 hours at 20 °C	
Cleaning of tools	immediately after use with einzA Universal Nitroverdünnung A I.	
-	Dried material can only be removed mechanically.	
Storage	dry and protected against frost. Ideal storage temperature 10 - 20 °C.	
-	Close opened containers tightly and use at short notice.	

III. Coating and/or applying technique

Preparation of surfaces and processing regulations

The surface to be coated has to be even, dry, free of dust, sufficiently impact and pressure resistant and free of weak adhesive components and scaps. Adhesion lessening substrates like grease, oil and colour residues have to be removed accordingly beforehand.



Loose and separative acting substrates like for example laitances, sinter layer and rubber abrasion have to be removed mechanically accordingly with suitable tools. Provided by the customer it has to be assured that the surface is isolated against ascending humidity.

Notices of professional associations like for example Bundesverband Estrich und Belag e.V. die "BEB-Arbeitsblätter" KH-0/U and KH-0/S in the current copy have to be regarded. Surfaces have to be prepared mechanically.

Concrete and floor pavement surfaces have to be hardened at least for one month and confirm to the requirements of the minimum concrete strength classes B 25 according to DIN 1045 resp. ZE 30 according to DIN 18 560, part 1.

Surfaces which fulfill the requirements of quality standard C20/25 in case of concrete floor resp. quality standard CT-C35-F5 in case of cement floor are suitable.

The surface stability (separation stability of the surface) has to be at least 1.5 N/mm (AGI-process sheet A 80).

The cementitious floor pavement has to be dried up to the so called household dampness, that means that the moisture content may be max. 2 - 5 %. This content is normally reached after drying the surfaces for one month. In case of doubt a moisture measurement with a CM-indicator has to be made. The surface residual moisture may not exceed 4 CM% for concrete and cement floor pavements and 0.5 CM% for anhydrite floors (calcium sulfate floor pavement).

Adjoining coating surfaces of iron and steel, zinc or light metal will be, after pre-treating accordingly, primed with einzA Lawirostal 2-K-Epoxi-Primer before coating (please request the Technical Data Sheet and consider).

System structure for elastic floor coatings without intermediate sanding

Pre-treat surfaces like for example concrete, cement floor pavements or similar mechanically, for example by shot peening. Priming with einzA LawiDox Epoxidharz-Grundierung. Consumption: approx. 0.3 - 0.4 kg/m².

Levelling compound with einzA LawiDox Epoxidharz-Grundierung and siliceous sand with the grain-size distribution curve of 0.1 to 0.3 mm in the mixing ratio 1 : 0.8 (weight parts). Consumption of mixture approx.. 0.8 - 1.2 kg/m².

Coating with a doctor knife of einzA LawiPen 2-K-PU-Beschichtung for example with a toothed strip like Pajarito 48, Storch R2. Consumption 2.3 - 2.6 kg/m².

After 10 - 20 minutes vent with spiked roller.

Pre-treating of melted asphalt

Pre-treat the surface by shot peening.

Directly afterwards a levelling compound with einzA LawiPen 2-K-PU-Beschichtung by adding approx. 20 - 30 % siliceous sand with the grain-size distribution curve of 0.1/0.3 mm. Consumption approx. 0.8 - 1.0 kg/m².

For the following coating the surface has to be non-porous.

Coating with a doctor knife of einzA LawiPen 2-K-PU-Beschichtung for example with a toothed strip like Pajarito 48, Storch R2. Consumption 2.3 - 2.6 kg/m².

After 10 - 20 minutes vent with spiked roller.

Decorative, low-emission final sealing

In case of elastic pavements inside the transparent sealing will be effected with einzA LawiPen Siegel. Consumption 0.120 - 0.140 kg/m².

With einzA Strukturmittel the anti-slip property can be adjusted up to R10.

The scattering of einzA DekorChips is possible with a following transparent sealing.

The sealing of einzA LawiPen 2-K-PU-Beschichtung has to be made using clean overshoes. Spikes may not be used.

System structure for elastic balcony floor coatings with intermediate sanding outside

Priming with einzA LawiDox Epoxidharz-Grundierung. Consumption: approx. 0.3 - 0.4 kg/m². Open sanding of the fresh surface with siliceous sand with the grain-size distribution curve of 0.3/0.8 mm. Consumption approx.. 0.5 - 1.0 kg/m².

After drying a levelling compound with einzA LawiPen einzA LawiPen 2-K-PU-Beschichtung by adding approx. 20 - 30 % siliceous sand with the grain-size distribution curve of 0.1/0.3 mm. Consumption approx. 0.8 - 1.0 kg/m².

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For the following coating the surface has to be non-porous.

Coating with a doctor knife of einzA LawiPen 2-K-PU-Beschichtung for example with a toothed strip like Pajarito 48, Storch R2. Consumption 2.3 - 2.6 kg/m².

After 10 - 20 minutes vent with spiked roller.

Outside the transparent sealing will be effected with einzA LawiDur 2-K-PU-Klarlack. Consumption 0.140 - 0.160 kg/m².

With einzA Strukturmittel the anti-slip property can be adjusted up to R10.

The scattering of einzA DekorChips is possible with a following transparent sealing.

IV. Security advice and labelling

The product is subject to the Ordinance on Hazardous Substances. Necessary details are included in the DIN Material Safety Data Sheet regarding CLP regulation (GHS) according to the regulation (EC) no. 1272/2008. Available at www.einzA.com at any time or to be requested using sdb@einzA.com. Labelings on the packaging have to be considered!.

VOC-content regarding enclosure II of the VOC guideline 2004/42/EG

VOC limit value enclosure II A (sub-category j): Lb: max. 500 g/l reg. level II (2010) VOC-content of the ready-to-use mixture of einzA LawiPen 2-K-PU-Siegel: < 500 g/l

CE-labeling regarding enclosure ZA 1 der EN 13 813

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72698	
DIN EN 13813:20	03-01
Kunstharzestrich DIN EN 13813: SR-B1,5	mörtel 5-AR0,5-IR20
Brandverhalten	C _n -s1
Freisetzung korrosiver Substanzen	SR
Verschleißwiderstand BCA	AR 0,5
Haftzugfestigkeit	B 1,5
Schlagfestigkeit	IR 20



The previous information has been conscientiously compiled according to the present state of knowledge of test technology and should serve as a guideline. Due to the multitude of uses and working methods, it is non-binding, does not establish any contractual legal relationship and does not release the consumer from his own responsibility of checking our products himself. Otherwise, our conditions of delivery and payment apply. **Issued 03/2021;** with this, all previous specification sheets are invalid.